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MONTEREY, CALIFORNIA

THESIS

**BEING SOCIAL: INTEGRATING SOCIAL MEDIA INTO
PUBLIC INFORMATION SUPPORT TO EMERGENCY
RESPONSE #smem**

by

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March 2013

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**BEING SOCIAL: INTEGRATING SOCIAL MEDIA INTO PUBLIC
INFORMATION SUPPORT TO EMERGENCY RESPONSE #smem**

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ABSTRACT

Emergency response agencies across the homeland security spectrum rely on their public information offices to leverage social media in support of citizens and response organizations during times of disaster. Do these public information practitioners have the guidance and tools necessary to represent their organizations effectively in times of emergency?

To answer this question, this thesis reviews social media policies at the local, state, federal and international emergency response agency levels, specifically looking at guidance provided for crisis communications social media use during and after a disaster. Case studies on the how social media are used during and after a disaster are studied from the various perspectives. Finally, this research examines additional considerations for social media and emergency response.

The policy review and case studies find a disparity between what is expected of our emergency response agency communicators and the guidance provided to them to meet the needs of our citizens and organizations in a time of disaster. This gap between policy and action leaves room for miscommunication and inconsistencies that must be addressed.

This thesis concludes with research analysis, addressing that information gap and provides a policy template for normal conditions and emergency response events.

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LIST OF ACRONYMS AND ABBREVIATIONS

CDC	Center for Disease Control and Prevention
CDEM	Civil Defense Emergency Management (Australia)
CRS	Congressional Research Service
DHS	Department of Homeland Security
DTS	Department of Technology Services (Utah)
DoD	Department of Defense
FEMA	Federal Emergency Management Agency
EF-5	Enhanced Fujita-5
EMI SIG	Emergency Management Issues Special Interest Group
ESF	Emergency Support Function
Maj. Gen.	Major General
MCFRS	Montgomery County Fire and Rescue Service (Maryland)
MONG	Missouri National Guard
MT DES	Montana Disaster and Emergency Services
NIMO	National Incident Management Organization
NIMS	National Incident Management System
OPSEC	Operational Security
QPS	Queensland Police Service
QR	Quick Reference
PII	Personally Identifiable Information
PIO	Public Information Officer
USACE	United States Army Corps of Engineers
VOST	Virtual Operations Support Teams

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EXECUTIVE SUMMARY

“Tweet,” “post,” “hashtag,” and “mention”—these words and our familiarity with them show the expanding acceptance of social media across our communities. Social media are a growing part of the nation’s conversation. However, this conversation is happening on digital platforms that many leaders in emergency response agencies are uncomfortable with and do not use themselves. There is a language to social media that can further alienate those not using those media on a consistent basis, like “post,” “tag,” and “lurker.” When there is a conversation happening in an unfamiliar area in a confusing language, there is the temptation to ignore that conversation. Because this conversation involves citizens and affects every aspect of the homeland security enterprise, particularly emergency response agencies, leadership, and practitioners must overcome any fear and bias toward social media. They must work to understand and embrace social media so they can be leveraged to ensure the best support possible to citizens and communities.

Through the lens of a public affairs practitioner with more than 18 years of experience in crisis communication, including the May 22, 2011, Joplin tornado, several aircraft accidents, combat casualties, and more than two dozen state emergency duties, this researcher works to provide public information practitioners across the nation with the support and tools necessary to successfully leverage social media in support of communities and organizations in the face of a disaster.

We must consider the question do our emergency response public information communicators have the policies in place to be successful using social media after a disaster? This thesis answers the question, how can public information officers integrate social media into communications during emergency response? To address that question, this thesis looks at the current literature surrounding social media and emergency response; existing social media policies for emergency response organizations at the local, state, federal, and international levels; how social media are being used in emergency situations; other factors affecting social media and emergency response; and a findings analysis for each section.

In the policy analysis, it became evident that not all agencies active in social media have a policy to support that activity. The policies that do exist range from one page documents to more than 50 pages and cover everything from the establishment of a page to the archiving of data to meet state regulations. It became important to focus on items specifically related to using social media during crisis communication because, while most aspects of the use of social media during normal operations can be applied to an emergency situation, there are aspects that must be tweaked to meet disaster-specific requirements. For example, while it is typically appropriate to leave an office in the afternoon and not check the organizational social media presence until the next morning, during an emergency there needs to be constant monitoring, both to assist with any questions and to monitor for rumor control aspects. Some policies had significant inclusion of crisis communications issues, but largely the policies were void of guidance on communicating during and immediately after a disaster. This is particularly worrisome at the local level because every disaster response starts at the local level. Those public information practitioners are the tip of the sword in ensuring an accurate consistent message is shared across all platforms and to all audiences.

Exploring the case studies on the use of social media in a disaster revealed a diverse collection of experiences, with data ranging from simple screen shots to robustly detailed accounts of individual situations during the disaster. The case studies from the local, state, federal, and international perspectives are vital in understanding the full scope of current participation in the social media spectrum. It is again important to focus specifically on public information use of the medium related to during or directly after a disaster. The analysis reveals public information practitioners are using social media across the response spectrum, with no data collected on any substantial deterrents to using social media and emergency response, indicating the general fear of using social media, from misinformation to legal liabilities, appears to be unfounded.

Looking at additional social media and emergency response considerations exposes us to a variety of concepts that are improving real-time collaboration, digital volunteerism, crowd sourcing, applications, and social media monitoring, all using technology in ways that would have been inconceivable only a short time ago. There are

leaders in emergency management that are willing to be innovative in the area of social media technologies, and that leadership will ensure the homeland security enterprise remains part of the social media conversation. The tools analyzed are already valuable resources and will expand as emergency management professionals learn more about these systems and creatively apply their uses to current response systems in joint information centers, emergency operations centers and other aspects of supporting citizens during a disaster. It is equally important for homeland security and emergency response leaders, and in particular the public information practitioners, to remain engaged in these technologies to help determine what emerging trends might add value to the support of our citizens and communities in a time of disaster, this is a future of emergency management.

This research concludes there is a disparity between what is expected of emergency response agency communicators and the guidance provided to them to meet the needs of citizens and organizations in a time of disaster. This gap between policy and action leaves room for miscommunication and inconsistencies and must be addressed. Social media are widely used by the public and the emergency response community, during both normal operations and emergencies. There is a growing body of social media policies at the local, state, federal, and international levels, although one aspect these policies lack is guidance on using social media during crisis communications, during, and immediately after an emergency.

In order to help fill the gap of information in the lack of social media policies and to address the limited crisis communication guidance included in existing social media policies, this thesis offers a template to be used by public information officers at emergency response organizations working at the local, state, federal, or international levels. Social media is a growing part of the nation's conversation and homeland security enterprise must be a part of this conversation or they will fail. This thesis has worked to provide emergency response agency public information practitioners with the knowledge and tools necessary to successfully leverage social media during emergency response operation.

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This thesis is dedicated to my children, Morgan and Gavin, who encourage me, challenge me, and set the example on how to live life to the fullest.

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I. INTRODUCTION AND LITERATURE REVIEW

A. INTRODUCTION

“Tweet,” “post,” “hashtag,” and “mention”—these words and our familiarity with them show the expanding acceptance of social media across our communities. Social media are a growing part of the nation’s conversation. However, this conversation is happening on digital platforms that many leaders in emergency response agencies are uncomfortable with and do not use themselves. There is a language to social media that can further alienate those not using those media on a consistent basis, like “post,” “tag,” and “lurker.” When there is a conversation happening in an unfamiliar area in a confusing language, there is the temptation to ignore that conversation. Because this conversation involves citizens and affects every aspect of the homeland security enterprise, particularly emergency response agencies, leadership and practitioners must overcome any fear and bias toward social media. They must work to understand and embrace social media so they can be leveraged to ensure the best support possible to citizens and communities.

Through the lens of a public affairs practitioner with more than 18 years of experience in crisis communication, including the May 22, 2011, Joplin tornado, several aircraft accidents, combat casualties, and more than two dozen state emergency duties, this researcher works to provide public information practitioners across the nation with the support and tools necessary to successfully leverage social media in support of communities and organizations in the face of a disaster.

We must consider the question: do our emergency response public information communicators have the policies in place to be successful using social media after a disaster? How are local, state, federal, and international emergency response public communicators using social media after a disaster?

This thesis will answer the question, ‘How can public information officers integrate social media into communications during emergency response?’

To address that question, this thesis will look at the current literature surrounding social media and emergency response; existing social media policies for emergency response organizations at the local, state, federal, and international levels; how social media are being used in emergency situations; other factors affecting social media and emergency response; and a findings analysis for each section. Before looking at social media policies and how social media are being used during disasters, it is important to review the literature surrounding the topic.

B. LITERATURE REVIEW: SOCIAL MEDIA AND EMERGENCY RESPONSE

Citizens are increasingly turning to social media during an emergency. A recent survey finds 76 percent of Americans expect help in less than three hours of posting a request on social media.¹ The Internet is the third-most popular way for people to gather information, following only television and radio.² On the Internet, social media sites are the most popular source for emergency information, following online news sites.³

There is a growing field of literature in the area of social media and emergency response. The literature in this review includes the following areas:

- The history and evolution of social media.
- Government use of social media.
- Twitter and emergency management.
- The use of social media in a crisis.
- National Incident Management System: Emergency Support Function 15 and Social Media.
- The public, emergency response, and social media.

¹ American Red Cross, *Social Media in Disasters and Emergencies* (American Red Cross, 2012).

² Ibid.

³ American Red Cross, "More Americans Using Social Media and Technology in Emergencies," 3 PRN News Wire, August 24, 2011, <http://www.prnewswire.com/news-releases/more-americans-using-social-media-and-technology-in-emergencies-128320663.html> (accessed October 14, 2011).

1. The History and Evolution of Social Media

Social media is an umbrella term that covers all the various electronic tools, technologies, and applications that facilitate interactive communication and content exchange, enabling the user to move back and forth easily between the roles of audience and content producers.⁴

Some of the most popular social media platforms are social network sites. These Web-based services allow individuals to:

1. Construct a public or semi-public profile within a bounded system;
2. Articulate a list of other users with whom they share a connection; and
3. View and traverse their list of connections and those made by others within the system.⁵

The first recognizable social network site launched in 1997. SixDegrees.com allowed users to create profiles, list their friends, and surf the friends lists. All of these behaviors are closely associated with what the public now expects from social media sites.⁶ Likely as a result of being ahead of its time, SixDegrees did not become a sustainable business. Early adopters complained that there was little to do after accepting friend requests, and most users were not interested in meeting strangers.⁷ While the Internet had already millions of users, most did not have extended networks of friends who were online.

The end of the twentieth century and beginning of the twenty-first century allowed for a variety of experimentation in the social media market. Social media platforms like Friends, AsianAvenue, BlackPlanet, LinkedIn, Friendster, Ryze, and

⁴ Donya Currie, *Expert Round Table on Social Media and Risk Communication during Times of Crisis: Strategic Challenges and Opportunities*, Booz Allen Hamilton, 2010, http://www.boozallen.com/media/file/Risk_Communications_Times_of_Crisis.pdf (accessed June 19, 2011).

⁵ Danah M. Boyd and Nicole B. Ellison, "Social Network Sites: Definition, History, and Scholarship," *Journal of Computer-Mediated Communication* 13, no. 1 (2007).

⁶ Boyd and Ellison, "Social Network Sites."

⁷ Ibid.

MiGente were the building blocks creating the foundation for today's social media.⁸ When MySpace.com went online in 2003, it transformed the social networking market because of two main factors. MySpace differentiated itself by regularly adding features based on user demand, and it allowed users to personalize their pages. MySpace users were able to reflect their personalities through their online presence and share with virtual friends.

Social networking began a new era when Facebook was launched in 2004 and, although initially open to only college students, it quickly migrated to support a much broader audience. To join in the beginning, a user had to have a Harvard email address, but a year later, Facebook expanded to include high school students, professionals inside corporate networks, and, eventually, everyone.⁹ In October 2012, Facebook reached more than one billion users¹⁰ around the world, making it the largest of all the social media platforms in history.¹¹ Facebook transformed and currently dominates the social media environment.

With a different approach, Twitter went online in 2006, limiting all interactions to 140 characters or less. The limited post length is called micro-blogging and enables posters and readers to get directly to the point of a communication, without traditional fluff surrounding the message. Since its inception and the development of link-shortening tools, there is more flexibility with the amount of information one can share through the platform. While Twitter has many features similar to other online social network sites such as status updates and directed social connections between users, it does not require mutual acquaintance between members for most information to be shared. Once a user posts a message on their Twitter timeline, that message (tweet) becomes public and can

⁸ Boyd and Ellison, "Social Network Sites."

⁹ Ibid.

¹⁰ Aaron Smith, Laurie Segall, and Stacy Cowley, "Facebook Reaches One Billion Users," *CNN Money*, October 4, 2012, <http://money.cnn.com/2012/10/04/technology/facebook-billion-users/index.html> (accessed January 2, 2013).

¹¹ Ibid.

be viewed by anyone, unless the user chooses to make Twitter feed private. Because most tweets are publically viewable, some authors referred to Twitter as an information-sharing tool rather than a social network platform.¹²

The openness of information on Twitter also makes it a valuable tool for monitoring information, in particular, during an emergency situation. Twitter has been proven to be a particularly effective tool in the social media toolbox to quickly disseminate information among publics during critical times. Recent examples like the use of Twitter by the Obama's presidential election, Iranian street protests, great Chile earthquake, and Egyptian revolution in 2011, are just a sampling of the worldwide significance of Twitter in the area of public communication during times of change or disaster.

As social media becomes a larger part of the everyday lives of citizens, it is important that the government takes the time to learn about these tools and determine how best to apply them to assist in supporting individuals and communities.

2. Government Use of Social Media

The government, in particular emergency response agencies of the homeland security enterprise, has been slow to adopt the use of social media. For example, only recently have employees of the Department of Defense (DoD) had access to social media platforms like Facebook and Twitter. DoD still blocks several leading sites, including YouTube, serving to illustrate one of the numerous difficulties in leveraging social media by emergency response organizations.

One study suggests the application of social media falls into three categories:¹³

- Proactive utilization, including the active usage of social media systems like Facebook, Twitter, and others previously discussed, to both disseminate information and monitor public comments regarding their

¹² Adam Acar and Yuya Muraki, "Twitter for Crisis Communication: Lessons Learned from Japan's Tsunami Disaster," *International Journal of Web Based Communities* 7, no. 3 (2011): 392–402.

¹³ Adam Crowe, "The Social Media Manifesto: A Comprehensive Review of the Impact of Social Media on Emergency Management," *Journal of Business Continuity & Emergency Planning* 5, no. 1 (2011): 409–420.

agency and/or community event. Proactive utilization is the most complicated use of social media and requires the most time and resources to master.

- Reactive utilization of social media only disseminates and/or monitors public comments, but not both, and is the most common application within emergencies due to its more reasonable utilization of personnel, resources and time.
- Inactive category that covers those organizations that are completely inactive in social media. This inactive status is probably the most dangerous to emergency managers because it ignores the significant impact of social media on emergencies and disasters.

Many government agencies fall into the reactive and inactive forms of social media. For those that are active agencies, there is a need to ensure the communicators have the guidance and information to leverage social media on behalf of citizens and emergency response agencies.

In recent years, emergency response agencies have overcome several obstacles and are starting to incorporate social media into operations. A Congressional Research Service report states the use of social media for emergencies and disasters may be conceptualized as two broad categories.¹⁴ First, social media can be used somewhat passively to disseminate information and receive user feedback via incoming messages, wall posts, and polls.¹⁵ A second approach involves the systematic use of social media as an emergency management tool.¹⁶ Systematic usages might include, among others, using the medium to conduct emergency communications and issue warnings; using social media to receive victim requests for assistance; monitoring user activities to establish situational awareness; and using uploaded images to create damage estimates.¹⁷

As the news cycle has changed from evening and morning news, to a 24-hour news cycle, traditional media outlets have struggled with the same issue, working to be

¹⁴ Bruce R. Lindsay, *Social Media and Disasters Current Uses, Future Options, and Policy Considerations* (Washington, D.C.: Congressional Research Service, 2011).

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

first to report an issue, but also accurate.¹⁸ The director of the Federal Emergency Management Agency (FEMA), Craig Fugate said in testimony before Congress:

Technology grows and changes rapidly. Tools that did not exist even five years ago are now primary modes of communication for millions of individuals. Of course, tools like YouTube, Facebook, Twitter and others were not created for the purpose of preparing for, responding to, or recovering from emergencies and disasters. However, our success in fulfilling our mission at FEMA is highly dependent upon our ability to communicate with the individuals, families and communities we serve. For that reason, social media is extremely valuable to the work we do, and we are fortunate to have partners in the social media community with us here today who see the value of using these tools to increase public safety.¹⁹

The use of digital communication in times of emergency is gaining momentum with social media allowing users to generate content and to exchange information with groups of individuals and social networks.²⁰ This is highlighted with recent research showing a quarter of those surveyed by phone and a third of those surveyed online would use social media after a disaster to let loved ones know they are safe.²¹ In fact, the survey revealed up to 80 percent of Americans believe emergency response organizations should monitor social media sites to enable better response.²²

Emergency response agencies are using social media in a variety of ways the homeland security enterprise. For example, after the devastating tornado that hit Joplin, Missouri on May 22, 2011, social media was instrumental in the response and beyond.

¹⁸ Paul Berton, "Being First Versus Factual," *The Spec*, November 19, 2011, <http://www.thespec.com/opinion/columns/article/627452--being-first-versus-factual> (accessed November 29, 2011).

¹⁹ *Understanding the Power of Social Media as a Communication Tool in the Aftermath of Disasters*, Senate Committee on Homeland Security and Governmental Affairs, Subcommittee on Disaster Recovery and Intergovernmental Affairs (written Statement of Craig Fugate, Administrator, Federal Emergency Management Agency), May 4, 2011, Dept. of Homeland Security, <http://www.dhs.gov/news/2011/05/04/written-statement-craig-fugate-administrator-federal-emergency-management-agency>. Accessed August 30, 2012.

²⁰ Mark Latonero and Irina Shklovski, "'Respectfully Yours in Safety and Service' Emergency Management and Social Media Evangelism" (presented at the 7th International ISCRAM Conference, Seattle, WA, May 2–5, 2010).

²¹ American Red Cross, "More Americans Using Social Media," 3.

²² Ibid.

Many people across Missouri and the United States learned of the safety and whereabouts of loved ones through social media, both personal social media sites and several sites that emerged shortly after the disaster.²³ The Missouri National Guard, like many other organizations, worked diligently to contact all members that lived in Joplin to determine the safety of the soldiers or airmen and their families. When unable to reach a particular Guard member through other channels, the Missouri National Guard leadership turned to social media, through which the leadership was successful in locating him/her.

In addition to using social media as an emergency response multiplier within our borders, social media has provided a way for the general public to have direct access to national leaders on the international spectrum. Nine days after a catastrophic earthquake and tsunami hit Japan on March 11, 2011, the U.S. Ambassador to Japan was tagged in two Twitter messages. This immediate contact from citizens to leadership spotlighted the critical roles social media plays in emergency response and highlights the ability to communicate immediately in an international conversation.²⁴

FEMA is looking at how social media is being used and how it can be leveraged to provide a better response for our citizens, especially during an emergency. Laurie van Leuven, Department of Homeland Security Fellow, is working with the FEMA on a pilot program that would help connect and consolidate social media and more traditional organizational outreach.²⁵ This program recognizes the current chaos that is now emergency management and social media. It recommends developing a standardized naming convention, so that finding official information before, during or after an emergency is simplified. The pilot also is looking at developing a Web platform that is

²³ Kim Stephens, "Joplin Tornado Demonstrates Social Media's 5 Key Roles in Disaster Response and Recovery," *Idisaster 2.0*, May 23, 2011, <http://idisaster.wordpress.com/2011/05/23/joplin-tornado-demonstrates-social-medias-5-key-roles-in-disaster-response-and-recovery/> (accessed November 19, 2011).

²⁴ Steve Sternberg, "Japan Crisis Showcases Social Media's Muscle," *USA Today*, April 12, 2011.

²⁵ Laurie van Leuven, "Web 2.0 and California Wild Fires," presentation at Naval Postgraduate School, Monterey, CA, December 7, 2011.

easily localized and fuses official information and a variety of social media content.²⁶ This is just one way that FEMA is directing the use of social media during a crisis and in normal operations.

It is important to note that while social media has many positive aspects for emergency response, there are many concerns about the medium—rumors and misinformation are principle concerns for emergency response personnel entering the arena. In order to help mitigate some of those concerns, emergency response training exercises now incorporate social media rumors, in addition to traditional media interactions.

Because social media allows for the general public to publish information immediately, misinformation can quickly become a driving force of response.²⁷ For example, after a Virginia Tech police officer was shot and killed in December 2011, there was a great deal of information available immediately through social media, but much of that information was found to be inaccurate.²⁸ By incorporating social media into training exercises, agencies can learn to better address rumor control and misinformation and use those tools to better assist citizens during and after a crisis.

3. Twitter and Emergency Management

The social media platform, Twitter, is a particularly popular and powerful social media tool for emergency response. It was established as a micro-blog service limiting communication to 140 characters, but since its inception and the development of link-shortening tools, there is more flexibility with the amount of information that a person can share through the platform. In a study that examined Twitter applications in event detection, an event is defined as an “arbitrary classification of a space/time region, with actively participating agents, passive factors and products.” Events are things like

²⁶ van Leuven, “Web 2.0 and California Wild Fires.”

²⁷ Christa M. Miller and Tabatha Wethal, “Social Crisis Response,” Officer.Com, January 25, 2011, <http://www.officer.com/article/10222589/social-crisis-response> (accessed October 19, 2011).

²⁸ Katie Rogers, “Va. Tech Shootings: Rumors Spread Quickly through Social Media,” *Washington Post* [The Buzz], December 8, 2011, http://www.washingtonpost.com/blogs/the-buzz/post/virginia-tech-shootings-live-updates-and-video/2011/12/02/gIQAiluwfO_blog.html (accessed December 9, 2011).

earthquakes, typhoons, and traffic jams.²⁹ For the event detection, to have sensory value, tweets must be monitored and vetted. An example of measurement and vetting would include keyword, word context, and statistical features of a tweet.³⁰ There is ability to track an event, like an earthquake, through social media, using Twitter users as sensors and sensory observations through social media monitoring.

Another reason Twitter is a powerful tool in emergency response is the platform's support of application development to support a variety of efforts. At a 2011 social media emergency management camp, a Twitter representative said that while Twitter did not have the resources to develop applications specifically suited to emergency response, it remained committed to ensuring the platform remain open so third-party developers can harness the information available.³¹

4. The Use of Social Media in a Crisis

In March 2012, event organizers of the Expert Round Table on Social Media and Risk Communication during Times of Crisis conducted a Web survey to examine the many facets of social media during times of crisis. These facets include types of tools used and their effectiveness, barriers to their use, and coordination of social media with broader communications strategies.³² In the survey, a majority of respondents indicated they do not use any social media tools for communicating public health issues or emergencies. The results showed slightly more than one-third of the respondents reporting to use social media have used the tools for less than one year.³³ More than 75 percent of the social media users have used the tools for less than three years.³⁴

²⁹ E. Tobias, "Using Twitter and Other Social Media Platforms to Provide Situational Awareness during an Incident," *Journal of Business Continuity & Emergency Planning* 5, no. 3 (2011): 208–223.

³⁰ Ibid.

³¹ Clarence Wardell III and Yee San Su, *2011 Social Media + Emergency Management Camp: Transforming the Response Enterprise* (Alexandria, VA: CNA Analysis and Solutions, 2011), <http://www.scribd.com/doc/72281369/2011-Social-Media-Emergency-Management-Camp-Transforming-the-Response-Enterprise> (accessed November 19, 2012).

³² Currie, *Expert Round Table*.

³³ Ibid.

³⁴ Ibid.

The responding organizations reported that two-thirds of the organizations use social media only to communicate externally, or externally and internally, with less than one-third using social media for only internal communication.³⁵ Social networks, like Facebook, were the primary social media tools used, followed by blogs, text messaging, RSS feeds and micro-blogs, like Twitter. Nearly half the respondents used a combination of one department leading social media coordination for the organizations and departments independently overseeing their own social media use. Furthermore, respondents placed a slightly greater importance on educating the public as a goal for using social media, with affecting public behavior/encouraging public action also garnering a solid response.³⁶

In addition, the survey revealed a large majority of respondents are not evaluating the effectiveness of their organizations social media use. Those that are evaluating are using Web analytics, online comments, surveys, and word of mouth. The respondents identified several key obstacles that limit their organizations use of social media including competing priorities, staff limitations, lack of familiarity, organizational culture, privacy concerns, information technology limitations, and financial resources.³⁷

In contrast to obstacles identified by the roundtable's survey, others have found benefit of using social media in a crisis. For example, FEMA director Craig Fugate and other cite that it may increase the public's ability to communicate with the government.³⁸ While current emergency communication systems have largely been centralized via one-way communication—from the agency or organizations to individuals and communities—social media is changing emergency communication because information can flow in multiple directions (known as backchannel communications). One benefit of two-way communication is helping officials compile lists of the dead and injured, and contact information of victims' friends and family members.³⁹ Scholarly studies on the

³⁵ Currie, *Expert Round Table*.

³⁶ Ibid.

³⁷ Ibid.

³⁸ *Understanding the Power of Social Media*.

³⁹ Lindsay, *Social Media and Disasters Current Uses*.

use of social media for emergencies and disasters have identified a number of lessons learned and best practices when using social media for emergency management objectives. These include the need to identify target audiences, determine appropriate types of information for dissemination and making sure it is relevant and identifying and mitigating any negative consequences.⁴⁰

5. National Incident Management System and Social Media

When the *National Response Plan* was written in 2004, Facebook existed on college campuses only.⁴¹ As the plan has evolved, the emerging technologies of new media have become a large part of our nation's interpersonal network. Overall, Emergency Support Function (ESF) 15, external affairs, has a mission of providing citizens timely lifesaving information during major incidents.⁴² In support of the growing social media network, the U.S. Department of Homeland Security updated the ESF in 2009 and created an annex specific to social media.⁴³ The purpose of Annex R, Social Media, is to outline the plan for federal departments and agencies to use interactive communications (Web and social media) with the public during incidents requiring a coordinated federal response.⁴⁴

The government at the federal, state, and local levels has a responsibility to engage with the American public before, during, and after man-made disasters, natural events, and acts of terrorism. Furthermore, it has a responsibility to provide timely and effective communications through all communications channels—including Web, social networking, text, and other emerging technologies in addition to traditional methods—to better inform citizens affected by an incident ⁴⁵

⁴⁰ Lindsay, *Social Media and Disasters Current Uses*.

⁴¹ Jolie, O'Dell, "The History of Social Media [infographic]," Mashable, posted January 24, 2011, <http://mashable.com/2011/01/24/the-history-of-social-media-infographic/> (accessed October 20, 2011).

⁴² Dept. of Homeland Security, *Emergency Support Function 15: Standard Operating Procedures* (Washington, D.C.: U.S. Dept. of Homeland Security, 2006).

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Ibid.

The social media annex of ESF 15 states that official websites, social networking methods, online journals (blogs), photos, and videos are all effective tools to advise and inform the public if used in a coordinated, strategic, and timely manner.⁴⁶ Additionally, this annex states individual department and agency websites are the foundation of Internet communications and social media efforts.⁴⁷ Website guidelines include:

- Immediate Web content focus is on saving lives, sustaining lives, and ensuring a comprehensive recovery effort reflecting current citizen information needs.
- An agency website should not duplicate information that is the purview and expertise of other agencies.
- Information needs to remain under control of the “expert” agency and linked to by other agencies.⁴⁸

Moreover, the annex predicts affected citizens will use a variety of information sources that will provide information to save lives and property.⁴⁹ Also in the annex is the assertion that posting important, accurate, and timely content is the most important component of any Web and social media operation.⁵⁰

As they have affected FEMA, social medias have significantly impacted operational response systems like the U.S. National Incident Management System (NIMS), which helps to define a uniform and coordinated response to emergencies and disasters.⁵¹ Specifically, methods like NIMS define processes that include the collection, analysis, and distribution of emergency public information through a command and control system in which all messages are ultimately approved by a single person. This person, such as the incident commander or emergency operations center manager, has ultimate authority for the overall operations. It should be noted though, that this review and approval process is counterintuitive to the speed of social media systems like

⁴⁶ U.S. Dept. of Homeland Security, *Emergency Support Function 15*.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Crowe, *The Social Media Manifesto*, 409–420.

Facebook and Twitter. There is no system that effectively and efficiently blends operational models with social media systems. Consequently, this will continue to be a challenge for emergency managers until adjustments are made to the operational response systems that maintain levels of accountability and control without eliminating the benefit of utilizing social media systems.⁵²

6. The Public, Emergency Response and Social Media

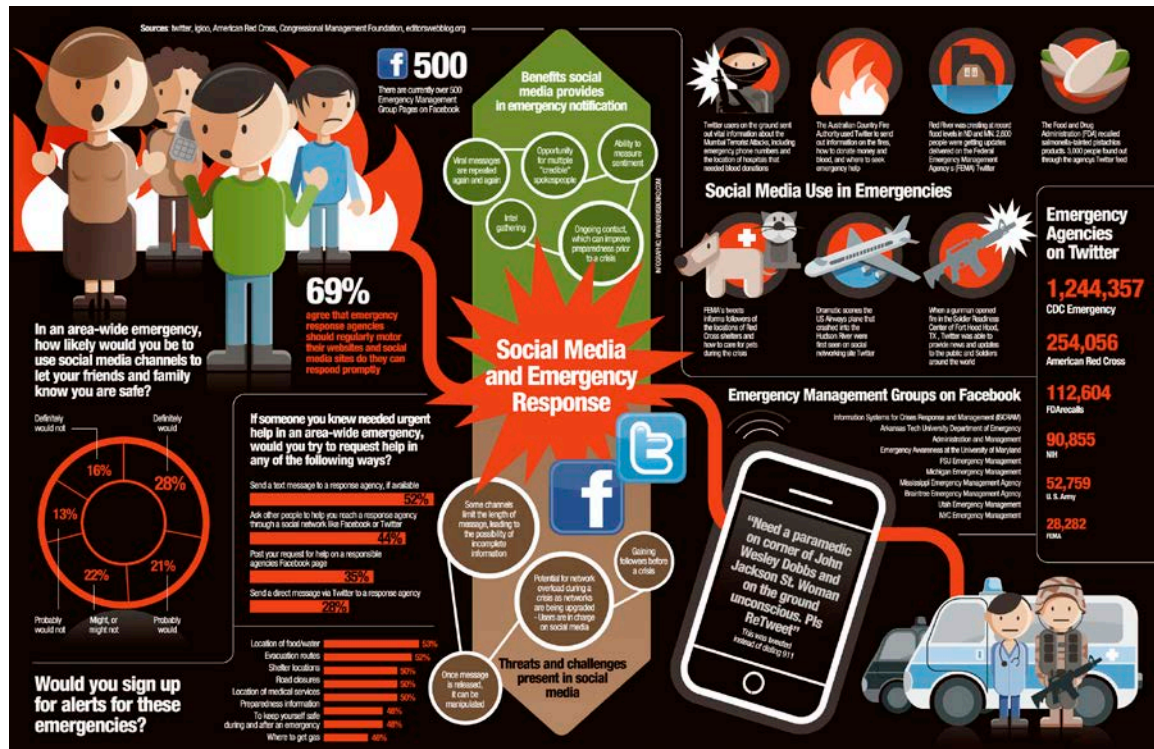


Figure 1. Social Media and Emergency Response⁵³

While the government is finding its place in the social media conversation, citizens and communities are actively engaging in the medium. A prominent blogger on

⁵² Crowe, *The Social Media Manifesto*, 409–420.

⁵³ O'Dell, "The History of Social Media."

emergency response and social media, Kim Stephens, of www.idisaster.com, suggests social media fills between five major functions during an emergency:⁵⁴

- Documentation of event. Members of the whole community are taking photos, videos, and sharing stories immediately after an event.
- I'm safe. Social media is being used increasingly to let loved ones know a community member is safe after a disaster.
- Where are my friends and family? In addition to letting family and friends know someone is safe, social media can help you find your loved ones that were affected by the disaster.
- Where to get/give help? There is typically an outpouring of support, and a need for that support in the near term after disaster hits, the response in Haiti showed how effective social media can be for those purposes.
- Recovery of lost items. In Joplin, social media was used extensively to help connect citizens with pets and to help locate missing hospital records.⁵⁵

This information can be helpful to the homeland security enterprise, provided the enterprise knows where to look.

Social media is being studied, if not embraced, at every level of our society. A recent Congressional report, *Social Media and Disasters: Current Uses, Future Options and Policy Considerations*⁵⁶ ends its review with "Assuming FEMA chooses to use social media, it is unclear what direction its form and development would take." It also states:

It could be argued that the positive results of social media witnessed thus far have been largely anecdotal and that the use of social media is insufficiently developed to draw reliable conclusions on the matter. By this measure, it should therefore be further examined and researched before being adopted and used for emergencies and disasters.⁵⁷

⁵⁴ Kim Stephens, "Mining the Social Media Data Stream," *Idisaster 2.0*, October 12, 2011, <http://idisaster.wordpress.com/2011/10/12/mining-the-social-media-data-stream/> (accessed 30 August 2012).

⁵⁵ Stephens, "Joplin Tornado Demonstrates."

⁵⁶ Lindsay, *Social Media and Disasters Current Uses*.

⁵⁷ Ibid.

Less than a week after that report was issued, the blogger cited earlier posted:

His suggestion that the adoption of these tools take place after “further examination is completed” is not really an option. Citizens, community organizations, volunteers and governments are already using social media for emergencies and disasters. Although I would agree that we all still have a lot to learn, I believe, as they say in my native Texas “the horse has already left the barn.”⁵⁸

“The horse has left the barn,” and the emergency response community must decide quickly if we want to ride the horse or stay in the barn with the chickens.

It is evident that social media is not a passing phenomenon. Although the utilization of social media systems by emergency management professionals is in its early stages, the future benefits and applications are nearly boundless. Citizens and media outlets are utilizing social media systems during emergencies. Thus, social media must begin to be employed by emergency managers in conjunction with traditional outreach to provide a comprehensive and thorough strategy for the distribution of emergency public information.⁵⁹

This literature review has looked at the history and evolution of social media, government use of social media; Twitter and emergency management; the use of social media in a crisis; National Incident Management System: Emergency Support Function 15 and Social Media; and the public, emergency response and social media.

In order to better understand how emergency response public information assets can leverage social media to enhance communications during emergency response, this thesis will further look at existing social media policies and case studies on the use of social media by public information personnel during an emergency response.

For the policy review, this thesis will analyze current social media policies for agencies that support emergency response operations. In order to understand the policies covering the entire spectrum of the emergency response community, this will look at

⁵⁸ Kim Stephens, “Social Media and Disasters: Current Uses, Future Options and Policy Considerations,” *Idisaster 2.0* September 13, 2011, <http://idisaster.wordpress.com/2011/09/13/social-media-and-disasters-current-uses-future-options-and-policy-considerations/> (accessed August 30, 2012).

⁵⁹ Crowe, *The Social Media Manifesto*, 409–420.

policies at the local, state, federal, and international levels. The policy reviews will focus on if policies offer the guidance necessary for public information practitioners to be successful in crisis communication efforts during and after a disaster hits.

This thesis also provides case studies addressing use of social media by public information aspects of emergency response organizations. The case studies will answer how social media was used by public information practitioners during emergency response, what aspects of the efforts were successful, and what problems were encountered during the incident.

After answering the questions for the established social media policies and the case studies on social media use by public information during emergency response, this thesis will offer findings, an implementation plan in the form of a social media policy template, and a conclusion. The guidance will provide sound policy for the use of social media during an emergency and will establish a baseline of guidance to ensure the conditions are in place for success in this public information environment.

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II. SOCIAL MEDIA POLICIES AT THE LOCAL, STATE, FEDERAL AND INTERNATIONAL LEVEL

This chapter looks at existing social media policies from across the emergency response spectrum and how those policies address social media use, in particular, during the crisis communication phase and during and immediately after a disaster. For this review, social media policies for agencies that support emergency response operations will be analyzed to determine if sufficient guidance is in place, or is needed, to support crisis communications during or after a disaster. The analysis will determine if policies provide needed information for the establishment and support of social media programs, looking at if the policies support post-incident social media use.

Emergency response agencies social media policies at the local, state, federal, and international levels will be evaluated during this policy review, and the analysis will be presented in the final section of findings. The local agencies will come from city and county governments from across the geographic spectrum of the United States. In addition, the state level policy review will look at policies at the state level and how they support emergency response support in the respective states. This will be followed by review at the federal level, which will review policies of federal agencies that represent the national emergency response community. Finally, at the international level, this review will analyze the policies of international communities that have used social media extensively during disasters and documented those experiences. The policies reviewed at the local, state, federal, and international levels are all available online and represent a cross-section of the nation.

A. LOCAL SOCIAL MEDIA POLICIES AND GUIDELINES

“All disasters start and end locally,” a common saying, used recently by Charles McKenna, Director and Joseph Picciano, P. E., Deputy Director Office of Homeland Security and Preparedness, State of New Jersey.⁶⁰ This saying highlights local agencies are the first responders after a disaster hits.

How are public information officers at local emergency response organizations across the country planning to use social media after a disaster? Social media policies at local emergency response agencies across the nation are limited, with existing social media policies ranging from non-existent, extremely limited, basic, to robust. This section will look to Minneapolis, Minnesota; Fairfax County, Virginia; and Seattle, Washington as examples of social media policies at the local emergency response organization level, both for best practices, and guidance on the use of social media during a crisis. The social media policies reviewed were available online and represent local policies from across the United States.

1. Minneapolis, Minnesota

The city of Minneapolis has developed a social media procedure document and a policy that “reflects the City’s commitment to being a 21st century government that is professional, efficient, transparent, accountable, and fair.”⁶¹ The policy states the responsibilities for the oversight and management of the city’s official social media sites and any subordinate department sites reside with the communications department. No guidance on the use of social media during and after an emergency.

2. Fairfax County, Virginia

Fairfax County, Virginia, has a social media policy that addresses crisis communication “During emergencies, all social media content and postings must be

⁶⁰ Charles McKenna and Joseph Picciano, “All Emergencies Start Locally,” New Jersey State League of Municipalities, February 2012, <http://www.njslom.org/magazine/2012-02/pg-24.html> (accessed October 4, 2012). Originally published in *New Jersey Municipalities* 89, no. 2 (2012).

⁶¹ City of Minneapolis, “Minneapolis Social Media Policy,” City of Minneapolis, 2011, <http://www.minneapolismn.gov/policies/WCMS1Q-066527> (accessed October 21, 2012).

coordinated with the Office of Public Affairs as part of its Emergency Support Function 15 protocols.”⁶² The document, similar to Minnesota’s policy, also designates the public affairs office as the lead agency.⁶³ Depending on the incident, specific social media sites may be established to serve as information portals, and the office of public affairs is provided the authority to establish any new social media sites needed during an emergency. In the guidance, the office of public affairs is also provided the authority to directly publish on any county social media site, allowing for the fastest information flow possible.⁶⁴ Although it states the public affairs office should coordinate with the other county agencies, when time is of the essence, which is often the case in an emergency, the office of public affairs does have direct access to the other sites.⁶⁵

There would be two primary methods of posting official information to social media sites not directly managed by the office of public affairs. One way is to have all the necessary and updated user name and password information for the other county sites and information can be posted as if by the site administrator. A second way would be to post on the other county sites (Facebook wall or mentioning in a Twitter post) through the social media persona of the county office of public affairs. The drawback to the second method would be that many of the other sites followers might not see the information as quickly as if the page administrators posted it, but it would likely be the preferred method, as it allows for the proper transparency necessary for effective crisis communications. Fairfax County has provided its public affairs and information coordinators some parameters for using social media in an emergency. In the next chapter, we will look at how the county used social media during Hurricane Sandy in 2012 and compare that use to Hurricane Irene in 2011.

⁶² Fairfax County, *Fairfax County Social Media Content Policy* (Fairfax, VA: Fairfax County, 2012).

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid.

3. Seattle, Washington

In the city of Seattle, the social media policy has a purpose statement of “addressing the fast-changing landscape of the Internet and the way residents communicate and obtain information online, City of Seattle departments may consider using social media tools to reach a broader audience.”⁶⁶ While providing social media guidance, the document also maintains more traditional communications options by directing content used on social media will also be posted to the city’s website. The policy also explains that social media use basically falls into the following two categories: either as channels for disseminating time-sensitive information as quickly as possible (example: emergency information) or as marketing/promotional channels, which increase the city’s ability to broadcast its messages to the widest possible audience.⁶⁷ There is reference to crisis communication in the Twitter standard, but it does not give specific attention to the use of social media during and after a disaster. While the guidance highlights that Twitter is a forum for getting information out quickly, it does not talk about what types of information, who is authorized to post to what sites and what sort of clearance procedures are expected before posting in those circumstances.⁶⁸ The city should consider adding crisis communications social media use to the existing social media policy.

This section of the chapter on social media policies provided a review of local level agency social media policies. The review looked at Minneapolis, Fairfax County, and Seattle as examples of social media policies at the local emergency response organization level. This section highlights local emergency management agencies across the nation are developing policies to support that use of social media, although there is a need for the policies to provide crisis communication guidance for social media use.

⁶⁶ Bill Schrier “City of Seattle Social Media Use Policy,” City of Seattle, October 2, 2009, <http://www.seattle.gov/pan/SocialMediaPolicy.htm> (accessed October 21, 2012).

⁶⁷ Ibid.

⁶⁸ Ibid.

B. STATE LEVEL SOCIAL MEDIA POLICIES AND GUIDELINES

All disasters start and end locally, but as soon as local resources have reached their limit, which can often happen immediately upon a disaster, then state resources are deployed in support of response operations. Because of this, it is important that state agencies that support emergency response operations are also prepared to use social media as a tool in public information outreach. In order to ensure consistent messaging, there must be a plan to integrate local messages into state operations.

How are public information officers at state emergency response organizations across the country planning to use social media during and immediately after a disaster? This section will look at states that have existing social media policies; specifically, are these policies equipping these organizations with the tools necessary to be successful in the use of social media in the face of disaster? States and state agencies across the nation are adopting social media policies. This section will look to the social media policies in North Carolina, Delaware, Washington, Oregon, Utah, and New York as examples of social media policies at the state emergency response organization level.

1. North Carolina

The state of North Carolina's *Best Practices for Social Media Usage in North Carolina* offers guidance for the establishment and archiving of social media presences.⁶⁹ The guidance says public information officers should spearhead the establishment of social media presences for their organizations with responsibilities to authorize sites and usage requests.⁷⁰ In the North Carolina document, there is no mention or guidance for the use of social media during a crisis or emergency, which leaves public information officers to make their own decisions during and after a disaster. This document could be more effective if it highlighted how the state would use social media during a disaster; for example, would new sites be established? How should rumors or misinformation be

⁶⁹ North Carolina Dept. of Cultural Resources, *Best Practices for Local Government Social Media Usage in North Carolina* (Raleigh, N.C.: North Carolina Dept. of Cultural Resources, 2010).

⁷⁰ North Carolina Dept. of Cultural Resources, *Best Practices for Local Government*.

handled? How should the state of North Carolina page communicate with other state or local pages? With some adjustments, this policy could be used to provide the guidance needed for communication in an emergency.

2. Delaware

In the state of Delaware, the social media policy purpose is to:

Provide guidelines to state organizations and employees to use existing and future social media technologies to provide information and interact with customers in social media venues in the performance of state business, within the framework deemed appropriate by state organization authorities. It will also provide guidelines for conduct by state employees who will use social media and social media venues to engage with customers on behalf of the state of Delaware.⁷¹

The Delaware guidance has a policy chapter offering guidance on providing identification and origin of the state employee or agency that is hosting the social media venue, focusing on the need for openness.⁷² The policy emphasizes accurate information, directing that state employees and state organizations must not knowingly communicate inaccurate or false information. The ethical code of conduct offers that customer protection and respect are paramount, transparency, and openness is essential; therefore, all interactions will be as factual and accurate as possible.⁷³

In addition, the state of Delaware policy includes guidance to avoid using undue caution about the public release of information. This is an interesting inclusion and provides the site administrator a solid base for communicating during an emergency as undue caution is oftentimes one of the main reasons it is difficult for the government to use social media as an effective communications platform. The ability to post information quickly is imperative, and to be given that authority through this policy is

⁷¹ Dept. of Technology and Information, State of Delaware, *State of Delaware Social Media Policy* (Dover: DE, Dept. of Technology and Information, State of Delaware, 2009). <http://dti.delaware.gov/pdfs/pp/SocialMediaPolicy.pdf> (accessed October 21, 2012).

⁷² Ibid.

⁷³ Ibid.

empowering for public information practitioners. The policy also recommends being as transparent as possible and to disclose as much information as possible.⁷⁴

The concept of transparency for social media and emergency response, in particular for government agencies is important. Trust is a major element of the public information outreach and maintaining transparency is a solid tool in developing trust. Transparency also can help with misinformation and rumor control, because if the source of information is clear, citizens can make more educated decisions about which information is trustworthy and relevant to them. This Delaware policy does not address social media usage after a disaster. However, many of the other tools provided in the policy can certainly be applied during and after a disaster. There would be value in the addition of specific emergency response options, but the current policy provides a solid path for public information practitioners to follow.

3. Washington

In Washington state, the social media policy immediately identifies the two primary audiences, the public and employees, and provides direction to public information practitioners on how to proceed on the social media platforms.⁷⁵ The policy also suggests consideration of how and when to use social media sites. In addition, the Washington policy recommends creating agency specific social media policies using existing processes for policy development and engage staff, including the staff from public affairs or communications team, information technology, risk management, records retention, contracting, and the attorney general's office.⁷⁶

While it is always a good idea to have a solid plan before starting any new communications effort and the creation of social media policy will provide a strong base to social media and emergency response efforts, the recommended team members in the policy may provide too many barriers to timely policy development and implementation.

⁷⁴ Dept. of Technology and Information, *State of Delaware Social Media Policy*.

⁷⁵ Office of the Governor of Washington State, *Guidelines and Best Practices for Social Media Use in Washington State* (Olympia, WA: Office of the Governor of Washington State, 2010), <http://www.governor.wa.gov/news/media/guidelines.pdf> (accessed September 30, 2012).

⁷⁶ Office of the Governor of Washington State, *Guidelines and Best Practices*.

The approval process for the implementation of new social media sites is as cumbersome as the social media policy development process. When working in social media, it is important to remember there is value, particularly in the area of timeliness, to having a single social media manager or office for an organization. Unless the recommending social media-working group plans to convene on a daily basis for the policy creation and on a weekly, or immediately/as needed basis for new site approval, there is a burden of time will make most social media efforts outdated before they begin in Washington state. Furthermore, the policy fails to address social media use after an incident that requires emergency response,⁷⁷ which leaves public information practitioners to develop independent responses when faced with the need to use social media in or after a disaster. Moreover, the restrictions placed on the establishment of social media policy and sites in Washington state create unnecessary hurdles to communicating in the rapidly changing information environment.

4. Oregon

In Oregon the *Social Networking Media: Combining Technology and Social Interaction to Create Value* was created to facilitate use of social media tools by state agencies.⁷⁸ The Oregon document offers some guiding principles such as ensure an agency sanctions the social media effort, stick to one's area of expertise, be meaningful and respectful, and reply to comments in a timely and respectful manner.⁷⁹ These guiding principles offer reliable tools for successful use of social media. The mention to be careful with "tiny URLs" is an unusual inclusion and seems limiting in an otherwise solid list of recommendations. Shortened, or tiny, URLs are indispensable in the use of micro-blogging sites like Twitter, offering the opportunity to share more information in the confines of only 140 spaces.

⁷⁷ Office of the Governor of Washington State, *Guidelines and Best Practices*.

⁷⁸ Dept. of Administrative Services, *State Guidelines: Social Networking Media Combining Technology and Social Interaction to Create Value* (Salem, OR: Dept. of Administrative Services, 2010) http://www.oregon.gov/DAS/ETS/EGOV/BOARD/docs/social_networking_guide_v2.pdf (access October 19, 2012).

⁷⁹ Ibid.

Additionally, the Oregon policy has some strong guidance like use plain language; train employees, empower employees with correct tools, and trust employees to use social media appropriately.⁸⁰ Furthermore, there is guidance on the creation and development of an agencies social media persona, for example, will the site be entirely professional with only news items shared or will this be a platform for fun interaction with questions and suggestions. The policies inclusion of transparency, pause, and mistakes are all worth noting, as all three are essential to an effective social media program. Organizationally speaking, leaders must be prepared that mistakes will happen, however, a couple ways that social media managers can help prevent or mitigate any mistakes is by being transparent and taking pause before posting.

In addition, the Oregon policy offers guidance on measurement of the effectiveness of social media usage, stating that measurement and evaluation are essential features of any communication strategy or tactic.⁸¹ It also offers actions to help effectively measure and evaluate social networking media, including performing a communications audit, defining measurement benchmarks through qualitative and quantitative metrics, communicating economic impact, and the study successful past measurement programs.⁸² The measurement of social media is not included in many other social media policies and sets Oregon's policy apart in its willingness to consider this important aspect. The Oregon model would provide value to other states by sharing a few examples of the measurement of effectiveness, as this is a way to show value to leaders that remain uncertain about social media. Despite detailed guidance on the use of social media in general and the various platforms, the Oregon policy does not address the use of social media after an emergency incident in the state. It could be adjusted easily to support crisis communications efforts and the focus on social media measurement would also provide important insight into how effective social media outreach is during an emergency.

⁸⁰ Dept. of Administrative Services, *State Guidelines*.

⁸¹ Ibid.

⁸² Ibid.

5. Utah

In Utah, the *Social Media Guidelines* states the decision to utilize social media technology is a business decision, not a technology-based decision⁸³. The goal of the Department of Technology Services (DTS) is not to say “no” to social media websites and block them but to say “yes” with effective and appropriate information assurance, security, and privacy controls.⁸⁴ This opening statement helps set the tone for the use of social media in the state of Utah. As social media continues to grow, technology departments have had to develop methods to address the new medium. This guidance to say yes provides a base of support for those agencies entering this communications spectrum. The Utah policy offers rules of engagement, with each including standards of transparency, judiciousness, knowledge, perception, responsibility, pause, and admission of mistakes (similar to the earlier Oregon policy).⁸⁵ The policy ends with a description of moderation, focusing on what is appropriate to remove from the page.⁸⁶ This is an important inclusion and will help the public information practitioners and page administrators during the difficult moments of seeing an uncomfortable post on the site. The Utah policy provides a good base, although it would add value if Utah looked at what aspects of its policy would be different when working in a crisis communications mode, versus the daily aspects of communications.

6. New York

The New York policy acknowledges that social media tools redefine the relationships between state governmental entities and the public by improving government transparency, increasing collaboration, humanizing government, encouraging discussion and citizen participation on public policy, and improving operational

⁸³ Dept. of Technology Services, *Utah Social Media Guidelines* (Salt Lake City, UT: Dept. of Technology Services, 2009), <http://www.utahta.wikispaces.net/file/view/State+of+Utah+Social+Media+Guidelines+9.29.pdf> (accessed October 19, 2012).

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ Ibid.

efficiency.⁸⁷ The policy addresses use of social media by state workforce members in their official and personal capacities and the security risks associated with the use of social media. This is important inclusion in a communications environment where the professional and personal use of social media is often blurred. Moderation guidelines provide some guidance for identifying comments made that are not appropriate for the organization; this helps page moderators make consistent and appropriate decisions when faced with questionable posts. Every organization has a different threshold for what can remain on a page and what should be removed, and putting thought into that threshold before a moment of crisis can help make sure consistent, appropriate decisions are made. The guide could be taken a step further with guidelines on how and what to post to social media, both during normal operations and also crisis communications during emergency operations.

Looking at state social media policies, there are a variety of different length and content to look to for examples. Most have included tools that would be useful during crisis communications, but few have created guidance specific to communications when a disaster hits.

C. FEDERAL LEVEL SOCIAL MEDIA POLICIES AND GUIDELINES

Social media represents a shift in the way we communicate, providing new ways to connect, interact and learn, says the Department of the Army in its social media handbook.⁸⁸ People no longer look for news; the news finds them. And in the world of social media, the perception of truth can be just as powerful as the truth itself. The Internet moves information quickly, whether for good or bad. Social media, with a variety of available platforms, can instantaneously connect users within a global network, making the transfer of information even more pervasive.

⁸⁷ State Chief Information Officer, *New York State Social Media Policy* (New York: Enterprise Strategy and Acquisition Services, 2011).

⁸⁸ Dept. of the Army, *Dept. of the Army Online and Social Media Division, U.S. Army Social Media Handbook* (3rd ed.), 2012, <http://www.slideshare.net/USArmySocialMedia/army-social-media-handbook-2012> (accessed July 27, 2012).

How are public information officers at federal emergency response organizations across the country planning to use social media after a disaster? This section will look at some federal emergency response agencies that have existing social media policies available on the Internet. Are these policies equipping these organizations with the tools necessary to be successful in the use of social media after a disaster? Federal emergency response agencies across the nation are developing social media policies. This section will look to the Center for Disease Control, U.S. Corps of Engineers, the Federal Emergency Management Agency, Department of the Army and Department of the Air Force as examples of social media policies at the federal emergency response organization level.

1. Center for Disease Control

The Center for Disease Control and Prevention (CDC) is active in social media and has published several social media documents including *The Health Communicator's Social Media Toolkit*, which defines types of social media and how they can be utilized,⁸⁹ and the "Guide to Writing for Social Media,"⁹⁰ which has information on specific social media platforms and how to best communicate on those platforms. Neither document addresses crisis communications or the use of social media during or immediately after a disaster. The CDC is a strong leader in a variety of emergency response situations; therefore, there is value in ensuring that the social media tools it encourages are ready to be used appropriately and consistently by public information officers in its purview, including guidance in the social media policies. This is a solid way to provide that direction.

⁸⁹ Center for Disease Control and Prevention, *The Health Communicators Social Media Tool Kit*, (Atlanta, GA: Center for Disease Control and Prevention, 2011).

⁹⁰ Center for Disease Control and Prevention, "CDC's Guide to Writing for Social Media," April 2012, <http://www.cdc.gov/socialmedia/tools/guidelines/pdf/guidetowritingforsocialmedia.pdf> (accessed October 21, 2012).

2. Federal Emergency Management Agency

Craig Fugate, Federal Emergency Management Agency (FEMA) administrator explains:

Tools like YouTube, Facebook, Twitter, and others were not created for the purpose of preparing for, responding to, or recovering from emergencies and disasters. However, our success in fulfilling our mission at FEMA is highly dependent upon our ability to communicate with the individuals, families and communities we serve. For that reason, social media is extremely valuable to the work we do, and we are fortunate to have partners in the social media community with us here today who see the value of using these tools to increase public safety.⁹¹

He adds, “Communication in and around a disaster is a critical, life-saving part of FEMA’s mission. Social media provides the tools needed to minimize the communication gap and participate effectively in an active, ongoing dialogue.”⁹² Fugate asserts that emergency response communities must plan for mobile technology use, state and local participation in social media, and receiving input from the public.⁹³

FEMA utilizes the resources of several non-governmental social media channels—such as YouTube, Facebook and Twitter—as tools to communicate with the public. There are no readily accessible FEMA social media guides available online. As the leader of much emergency response, it could be beneficial to the homeland security enterprise if FEMA took the lead in developing written policies that could be implemented by other federal agencies, as well as by state and local. This could help facilitate consistent communication, especially after a disaster strikes.

3. U.S. Army Corps of Engineers (USACE)

The U.S. Army Corps of Engineers (USACE) has several published social media guidelines, primarily by support district. This document looks at the Jacksonville District U.S. Army Corps of Engineers as an example of the agencies social media policies. The

⁹¹ *Understanding the Power of Social Media.*

⁹² Ibid.

⁹³ Ibid.

*Jacksonville District Social Media User Guidelines*⁹⁴ serve as the official guideline for use of social media at USACE, Jacksonville District, and offers several guiding principles. These guidelines include not using army.mil email addresses to establish social media accounts, being honest and respectful in comments, not releasing classified material, using the social media sites for professional use only, and pause and think before posting.⁹⁵ The document also offers rules of engagement, including operational security, transparency, judiciousness, staying in one's lane of knowledge, create interest and acknowledging mistakes; however, the rule of engagement of "be transparent" seems to be in conflict with the guiding principle of "Do not use your army.mil e-mail address to establish an account on a social media platform." The U.S. Corps of Engineers is often a federal partner in responding to disasters across our nation, like flooding and tornados, but the Jacksonville District policy does not address the use of social media during or after a disaster. The next chapter will provide a case study on USACE and the Bird's Point Levee disaster in 2011.

4. Department of Defense

The Department of Defense (DoD) has several published social media handbooks and a variety of social media tools. For this analysis, we will look at the *Army Social Media Handbook* (version 3)⁹⁶ and the Air Force social media handbook, *Navigating the Social Network*.⁹⁷ These two are selected because the nation's National Guards receive their guidance from both the Department of the Army and the Department of the Air Force. The National Guards are in the unique position that they have a dual role, with a

⁹⁴ U.S. Army Corps of Engineers [Jacksonville District], *U.S. Army Corps of Engineers Jacksonville District Social Media User Guidelines* (Jacksonville, FL: U.S. Army Corps of Engineers [Jacksonville, District]).

⁹⁵ Ibid.

⁹⁶ U. S. Dept. of the Army. *Department of the Army Online*.

⁹⁷ Air Force Public Affairs Agency and Social Media Division, "Navigating the Social Network: The Air Force Guide to Effective Social Media Use," 2012, <http://www.af.mil/shared/media/document/AFD-120327-048.pdf> (accessed July 27, 2012).

state mission in support of the state's governor, and a federal mission, in support of the president. The National Guard's role in homeland security and response to natural disasters is primarily in the capacity of its state role.⁹⁸

5. Department of the Army

Major General (Maj. Gen.) Stephen R. Lanza, Chief of Public Affairs for the Department of the Army explains:

As communicators, we operate in a 24-hour news cycle with the news moving faster than ever before. In order to be successful at telling the Army's story, we must take full advantage of all the communication tools at our disposal. It is important to be as transparent as possible. As communicators, we need to be the first with the truth, whether it's good or bad. Social media allows us to do that while also painting a visual picture, which allows us to shape messages. Recently, Army organizations have used social media to communicate during times of crisis. Communications regarding the earthquake in Japan, the tsunami threat in Hawaii, the tornadoes and floods in the Midwest—all benefited from Army communicators turning to social media to inform and update the public and the community.⁹⁹

The most recent version of the Army handbook includes a chapter devoted to using social media for crisis communications.¹⁰⁰ The handbook states that using social media to communicate with stakeholders during a crisis has proven to be effective due to its speed, reach and direct access.¹⁰¹ The Department of the Army offers the following as guidance for using social media in a crisis:¹⁰²

- Crisis management
- Build a community early
- Promote organizational social media presences
- You can't force trust

⁹⁸ Timothy J. Lowenberg, "The Role of the National Guard in National Defense and Homeland Security," *National Guard* 59, no. 9 (2005): 97.

⁹⁹ U. S. Dept. of the Army. *Department of the Army Online*.

¹⁰⁰ *Ibid.*

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*

- Post content to social media platforms often
- Post cleared information as it comes in
- Monitor content and conversations
- Answer questions
- Share information
- Encourage people on the scene to send info
- Use mobile devices
- Analyze results

In addition, the Department of the Army recommends building a social media community early, meaning now, before a crisis occurs.¹⁰³ Developing a social media presence before a crisis also gives an organization the opportunity to develop standard operating procedures in the medium and gives employees a chance to train and manage the medium.¹⁰⁴ Information should be posted quickly, when solid information is available. Not posting updates quickly during a crisis or not keeping the community informed may damage the organization's credibility.¹⁰⁵ One tool to ensuring an active site is to have a clear understanding of which personnel can approve information to be posted and the appropriate length of time for information to be approved. During normal operations, it is appropriate for it to take a day to approve information to be posted; however, during emergency operations, it is often an immediate posting that is necessary to get citizens the information they need.

However, social media is not just about posting information; monitoring social media content is a strong way to get a better understanding of what information the online community wants and needs. It is important to respond quickly to questions that are posted on social media. This is the best way to stop rumors before they run rampant,

¹⁰³ U. S. Dept. of the Army. *Department of the Army Online*.

¹⁰⁴ Ibid.

¹⁰⁵ Ibid.

and rumor control is large concern with emergency response leaders and social media. In addition, social media uses search engines and monitoring tools available to assist with tracking discussions.

Social media is about the community of online users, and an organization should be prepared to share information from and with other organizations with social media presences, like the American Red Cross. In addition, encouraging information from people on the scene of a crisis can help provide timely situational awareness. The guidance also highlights the use of mobile devices as a way to update social media sites from remote locations.¹⁰⁶ The final recommendation on using social media for crisis communications is to analyze the results, once a crisis situation is over, analyze what happened and used metrics and user feedback to see how adjustments might help the process in the future.¹⁰⁷

6. Department of the Air Force

The Air Force *Guide to Effective Social Media Use* is consistent with the Army social media guide. The Air Force guide does not have a chapter specific to crisis communication, but offers these tips for using social media during a crisis:¹⁰⁸

- The traditional rules of crisis communication apply.
- Earn the trust of your followers by posting both good and bad news. When you have a major crisis the audience is more likely to trust your information and appreciate your openness.
- Share accurate and approved information as quickly as possible. Don't wait for an article or press release to be available.
- Actively monitor conversations and questions on your social media properties. Answer questions and direct them to credible, approved information.
- Establish a monitoring schedule and assign roles to team members. Be prepared to monitor outside of regular duty hours.

¹⁰⁶ U. S. Dept. of the Army. *Department of the Army Online*.

¹⁰⁷ Ibid.

¹⁰⁸ Air Force Public Affairs Agency and Social Media Division, "Navigating the Social Network."

- Monitor other social media and websites to help you decide what to post to your properties. You may address inaccurate information or rumors.
- Collaborate with other Air Force units to help spread your message.
- Share information with one another.
- Complete an after-action report, and use lessons learned to help when the next crisis arises.

The commonalities of the two Department of Defense policies when using social media for crisis communications are:

- Earning trust is important.
- Speed and accuracy are a must; a short approval process must be developed.
- Monitor social media and provide feedback and responses when necessary
- Collaborate outside your organization to share information.
- After incident analysis is important so lessons learned can be applied.

Using the Department of the Army and the Air Force policies as examples, the Department of Defense has a strong understanding of the importance of social media in overall public information activities and, specifically, in the use of communicating during or after a disaster.

This section review reveals that federal agencies are using social media to some extent, and they appear to be providing solid social media guidance to public information officers in their agencies. However, not agencies all are including the use of social media during or after a disaster, leaving a gap in guidance that could result in conflicting use of the mediums.

D. INTERNATIONAL SOCIAL MEDIA POLICIES AND GUIDELINES

The Internet has made the world smaller, bringing disasters from across the globe into living rooms and onto mobile devices. It is important to consider the use of social media in the international environment while developing the way forward in the United

States. This international policy section will look at policies in Australia and New Zealand, both of which have been very active in the use of social media in the area of emergency response.¹⁰⁹

1. Queensland, Australia

Queensland has two different published documents a *Social Media Policy*¹¹⁰ and *Social Media Guidelines*.¹¹¹ The policy establishes requirements for agencies electing to use social media tools so they may do so within an authorized and accountable environment,¹¹² while the guidelines present best practices and recommend a risk-managed approach.¹¹³ In addition, the guidelines offer the concept of personal versus professional use of social media by developing three specific areas. The first area is authorized, professional posting on agency sites, professional use of social media based on area of expertise outside the agency and personal use. The overriding guidance for all three is transparency and not crossing the line between personal use and professional use of the medium.

The guidance also highlights the importance of transparency and says that all agencies should be fully transparent in their interactions within social media, including the addition and removal of content.¹¹⁴ The Queensland *Guideline* does not provide specific information about using social media after an emergency response incident.¹¹⁵ This interesting considering that the document was developed largely after social media's

¹⁰⁹ Deanne Bird, Megan Ling, and Katherine Haynes, "Flooding Facebook: The Use of Social Media during the Queensland and Victorian Floods," *Australian Journal of Emergency Management* 27, no. 1 (2012): 27.

¹¹⁰ Queensland Government Enterprise Architecture, *Official Use of Social Media Guideline* (V1.0.0), (Queensland, Australia: Queensland Government Enterprise Architecture 2010), <http://www.qld.gov.au/web/social-media/policy-guidelines/guidelines/documents/social-media-guideline.pdf> (accessed July 27, 2012).

¹¹¹ Ibid.

¹¹² Ibid.

¹¹³ Ibid.

¹¹⁴ Ibid.

¹¹⁵ Ibid.

importance during recent disasters in that region, which will be reviewed in the next chapter. While many aspects of normal operations social media use can be readily applied during and after a disaster, it is important to provide public information practitioners with the tools necessary to effectively represent the agency during and after a disaster.

2. Wellington, New Zealand

Wellington published a robust *Social Media in an Emergency: A Best Practice Guide* taking the time to separate the document into the areas of before, during, and after an emergency.¹¹⁶ Because so many policies robustly support the before an emergency part of social media use, let us look closely at what Wellington Civil Defense Emergency Management Group (CDEM) offers for the use of social media during a disaster. It states a key element of using social media is the development of appropriate social media policies and recommends to “ensure policies for the use of social media emphasize adaptive problem solving as prescriptive policies will only cause delays at times where fast action is critical.”¹¹⁷ The CDEM highlights that to be effective in the emergency use of social media, a presence must be established before an emergency hits.¹¹⁸ While social media is an important tool in all phases of emergency management, during a crisis it is extremely important to be prepared to direct the appropriate resources to social media engagement so that any questions are answered quickly, rumors can be quickly mitigated, and the community feels informed.¹¹⁹ Links with other organizations is emphasized as important because effective partnerships improves information sharing, reduces rumors and miscommunication, and can help lessen the workload on one agency.

¹¹⁶ G. Rive, J. Hare, J. Thomas, and K. Nankivell, *Social Media in an Emergency: A Best Practice Guide* (version 1.0), (Wellington, New Zealand: Wellington Civil Defense Emergency Management Group, 2012), <http://www.gw.govt.nz/assets/Emergencies--Hazards/WREMO/Publications/Social-media-in-an-emergency-A-best-practice-guide-2012.pdf> (accessed July 27, 2012).

¹¹⁷ Ibid.

¹¹⁸ Ibid.

¹¹⁹ Ibid.

Globalization requires that when looking for ideas and solutions on existing social media policies that we look outside the borders of the United States and see what policies are working in other nations. Australia and New Zealand have both provided sound social media policies that were developed after significant participation in the area of social media and emergency response.

3. Findings

In this chapter of policy analysis, it is evident that not all agencies active in social media have a policy to support that activity. The policies that do exist range from one page documents to more than 50 pages and cover everything from the establishment of a page to the archiving of data to meet state regulations. It became important to focus on items specifically related to using social media during crisis communication because, while most aspects of the use of social media during normal operations can be applied to an emergency situation, there are aspects that must to be tweaked to meet disaster specific requirements. For example, while it is typically appropriate to leave an office in the afternoon and not check the organizational social media presence until the next morning, during an emergency there needs to be constant monitoring, both to assist with any questions and to monitor for rumor control aspects.

There were some significant inclusion of crisis communications issues in the Department of Defense and Wellington, New Zealand documents, but largely the policies were void of guidance on communicating during and immediately after a disaster. This is particularly worrisome at the local level, because every emergency response starts at the local level and those public information practitioners are the tip of the spear in ensuring an accurate, consistent message is shared across all platforms and to all audiences. There is a gap of information in providing crisis communications social media policy, specifically during and immediately after a disaster. The final chapter of this thesis will provide a way forward to help bridge that gap.

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III. SOCIAL MEDIA USAGE AT THE LOCAL, STATE, FEDERAL AND INTERNATIONAL LEVEL

This thesis has looked at the current literature on social media and its reviewed existing social media policies for emergency response agencies at the local, state, federal and international level, with a focus on the public information mission and crisis communication after an incident occurs. With the knowledge of how public information practitioners are equipped with guidance on the use of social media, this chapter will look at case studies of how social media is being used by emergency response agencies during and after a disaster with case studies on a variety of disasters, from the local, state, federal and international perspective and present finds of the analysis.

A. LOCAL SOCIAL MEDIA USAGE

All disasters start and end locally.¹²⁰ This saying highlights that our nation's first responders in an emergency are local. How are public information officers at local emergency response organizations across the country using social media after a disaster? Looking at how the emerging medium is used at the local level is the first step in understanding the path forward in social media. This section will look at how the following communities used social media during emergency response operations: Fairfax County, Virginia, and Hurricane Sandy in 2012; Joplin, Missouri, tornado in 2011; Montgomery County, Maryland, 2010 snow storm response in 2010; Mecosta County, Minnesota, 2011 flood response; and Virginia Tech in 2007.

1. Fairfax County, Virginia—Hurricane Sandy, October 2012

When Hurricane Sandy hit the East Coast in October 2012, the Frankenstorm took the lives of nearly 150 citizens and left damage that cancelled the New York City Marathon.¹²¹ Fairfax County, Virginia, while still recovering from the devastating storm, looked at social media statistics and compared them to Hurricane Irene, a storm system

¹²⁰ McKenna and Picciano, "All Emergencies Start Locally."

¹²¹ Tim Sharp, "Hurricane Sandy: Facts about the Frankenstorm," Live Science, November 27, 2012. <http://www.livescience.com/24380-hurricane-sandy-status-data.html> (accessed January 13, 2013).

hitting the same region in 2011. The county had already established an emergency information blog and as the storm approached, and a new emergency Web banner was placed at the top of every county webpage making sure the blog was top of mind information for citizens visiting any county site. During Hurricane Sandy the blog had 384, 651 views, up from 50,668 for Hurricane Irene,¹²² with the biggest driver of those views being from county websites and Facebook being the second largest view generator. Information initially shared on the blog was a variety of preparation information, both what the county government was doing and ways citizens should prepare. As the storm hit and the response began, the site posted information about shelters, traffic issues and damage in the area.¹²³

The county also used its established Facebook and Twitter pages to disseminate information to citizens, many times linking back to an original emergency information blog post. During and after the disaster, the Facebook page received 10,175 likes, comments and shares; compared to Hurricane Irene in 2011 with 869 likes, comments and shares.¹²⁴ To help put it in perspective, in the nine-month period preceding Hurricane Sandy, the Facebook page received a total of 8,418 likes, comments and shares.¹²⁵ Twitter was another busy social media platform for the county, with 1,494 retweets (when a Twitter user uses another users Twitter post and shares it with their own followers), and 1,127 new followers compared with Hurricane Irene of 333 retweets and 292 new followers.¹²⁶ During Hurricane Sandy, the county also promoted the use of the hashtag #ffxstorm, allowing the ability to filter information down to the specific area of

¹²² Fairfax County, “Metrics Report: Special Edition: Hurricane Sandy,” (October 2012). <http://www.fairfaxcounty.gov/emergency/metrics/hurricane-sandy-metrics.pdf>? (accessed November 30, 2012).

¹²³ Ibid.

¹²⁴ Ibid.

¹²⁵ Ibid.

¹²⁶ Ibid.

Fairfax County storm information.¹²⁷ The county expects to continue to advocate for a specific hashtag, depending on the emergency, either one created by the county, or one that emerges and is widely used by the community.¹²⁸

For the first time, the county offered two mapping offers for the community, a county supported road closure map, and a crowd-source reporting map. The county map had more than 16,000 views, and the crowd-source map had almost 13,000 views and 111 crowd-sourced reports from citizens.¹²⁹ Fairfax County has also been focusing on a mobile strategy and had 1,700 downloads of its iPhone application (compared to 289 in Hurricane Irene) and more than 9,500 visits to its mobile emergency page.¹³⁰ YouTube and the county's online discussion board, Ask Fairfax! were also used during the storm system with five videos created, more than 3,000 views on YouTube, a discussion forum featuring several county leaders, and 346 questions on the discussion board.¹³¹

This information gleaned from Fairfax County is important because it highlights the significant increase in social media engagement from the public between Hurricane Irene in 2011 and Hurricane Sandy in 2012, it is also interesting to see how citizens are consuming social media information, in that region blogging was the primary information source with Facebook being a second source.

2. Joplin, Missouri—Tornado, May 2011

On Sunday, May 22, 2011, a catastrophic Enhanced Fujita-5 (EF-5) tornado struck the city of Joplin, Jasper County, and Newton County in southwest Missouri in the late afternoon. With winds in excess of 200 miles per hour (mph), the three-quarter mile-

¹²⁷ Fairfax County, "Metrics Report."

¹²⁸ Ibid.

¹²⁹ Ibid.

¹³⁰ Ibid.

¹³¹ Ibid.

wide tornado cut a six-mile path of destruction through central Joplin.¹³² The tornado caused 161 fatalities and approximately 1,371 injuries as of May 27, 2011, making it the single deadliest U.S. tornado since 1947.¹³³ Thousands of structures were destroyed or damaged, from single-family homes to apartment buildings to large retail and public buildings, including St. John's Regional Medical Center, the Home Depot, and Wal-Mart.¹³⁴

The Federal Emergency Management Agency (FEMA) conducted a lessons learned study that related to the whole community and FEMA's contributions to the response. The report contained several findings,¹³⁵ including the success of the city of Joplin's use of social media and traditional mechanisms to communicate emergency information to the public and conduct outreach to support long-term recovery.¹³⁶ Prior to the tornado, city personnel had not extensively used social media to share information with residents. Shortly after the tornado, a city employee with social media experience began managing Joplin's Facebook page, also establishing a Twitter page, and a YouTube channel, with additionally city employees providing assistance when the number of postings increased significantly.¹³⁷ The city's Facebook page only allowed posts by city officials; individuals could comment on these posts but could not create their own.¹³⁸

¹³² Federal Emergency Management Agency, *The Response to the 2011 Joplin, Missouri, Tornado Lessons Learned Study* (Washington, D.C.: Federal Emergency Management Agency, 2011), <http://kyem.ky.gov/teams/documents/joplin%20tornado%20response,%20lessons%20learned%20report,%20fema,%20december%2020,%202011.pdf> (accessed July 27, 2012).

¹³³ Ibid.

¹³⁴ Ibid.

¹³⁵ Ibid.

¹³⁶ Ibid.

¹³⁷ FEMA, *Disaster Recovery: The Public Information Partnership Formed by the Cities of Joplin and Duquesne, the State of Missouri, and the Federal Emergency Management Agency after the May 22, 2011 Tornado* (Washington, D.C.: Federal Emergency Management Agency, 2011).

¹³⁸ Ibid.

The city was not the only one turning to social media after the disaster; several independent Facebook pages surfaced and quickly gained thousands of fans. One page that rose to the top was Joplin Tornado Info, created by the mother-daughter volunteer team of Rebecca and Genevieve Williams.¹³⁹ The University of Missouri Extension Service's David Burton became a part of the administration team said he states, "I think this is an important tool that is going to expand as a communication method used after disasters."¹⁴⁰ In addition, he feels social media played such a strong role in the response to the Joplin tornado because of its ease of use, its ability to keep people engaged, and the boon of smart phones.¹⁴¹

The same team of the Williams and Burton created Missouri Flood Info and Branson Tornado Info, two more Facebook pages that assisted Missourians through the response to natural disasters.¹⁴² The Missouri Flood Info page was a collaboration of state, federal, and local agencies and organizations involved in addressing flooding in Missouri.¹⁴³ The Branson Tornado Info page was created after the Joplin tornado in anticipation of a similar event and when the town was hit with a tornado on Leap Day 2011, the page went from two fans to more than 7,000 overnight.¹⁴⁴ Joplin's use of social media and the subsequent use in emergencies in Missouri highlight the growing use and acceptance of social media for crisis communications during and after a disaster.

3. Mecosta County, Michigan—Flooding, April 2011

The disaster does not have to be as large or deadly as the Joplin tornado to warrant leveraging social media. The Mecosta County, Michigan Emergency

¹³⁹ Rebecca Williams, Genevieve Williams and David Burton, *The Use of Social Media for Disaster Recovery* (version 2.0). (Neosho, MO: Rebecca and Genevieve Williams [Joplin Tornado Info] and David Burton [MU Extension], 2012).
<http://extension.missouri.edu/greene/documents/PlansReports/using%20social%20media%20in%20disaster%20s.pdf> (accessed November 30, 2012).

¹⁴⁰ Ibid.

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ Ibid.

¹⁴⁴ Ibid.

Management director, James Buttleman, used social media to share images and video of damage caused by flooding in April 2011. County officials and the news media followed Mecosta County's social media platforms to get real-time damage information from the director.¹⁴⁵ When surveying the damage caused by the flooding, the director used his mobile phone to document failed and failing roads and culverts and other damage. He posted the photographs to Mecosta County's Facebook and Twitter pages, which were widely followed by county officials and news media, giving them information as quickly as it was observed.¹⁴⁶ Sharing information through social media was less time consuming for the director than sending e-mails or receiving numerous phone calls, and it gave the information consumers direct access to updates.¹⁴⁷ Mecosta County's use of social media during and after emergencies highlights its value in getting specifically targeted messages to the community and how that can help with the overall response efforts of an organization.

4. Montgomery County, Maryland—Winter Storms, February 2010

The Montgomery County, Maryland, Fire and Rescue Service (MCFRS) used Facebook, Twitter, and a blog in a concerted communications strategy to request community support in uncovering fire hydrants buried in snow after consecutive February 2010 winter storms. MCFRS personnel used social media to share information and provide guidance to the community, resulting with strong community participation.¹⁴⁸

With several snowstorms forecasted, emergency response officials in Montgomery County were concerned about the prolonged covering of fire hydrants by all the snow and began a social media campaign requesting that community members uncover fire hydrants.¹⁴⁹ Firefighters driving through the county observed hydrants had

¹⁴⁵ FEMA Lessons Learned Information Sharing. *Disaster Recovery*.

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

¹⁴⁸ Ibid.

¹⁴⁹ Ibid.

been shoveled properly and were ready for use in an emergency. In addition, residents posted photographs of cleaned-off hydrants on the MCFRS Facebook page. This effort by MCFRS personnel demonstrated an effective use of social media to leverage community participation in recovery operations. The use of social media in this manner mirrors the Federal Emergency Management Agency's initiatives to engage the public in a two-way conversation through social media. The campaign also represented a whole community approach to recovery efforts in which traditional emergency management partners worked alongside community members.¹⁵⁰

5. Virginia Tech Campus, Virginia—Shooting, April 2007

While social media has an important role in emergency response communications, there are times when it can hamper, or appear to hamper, communications efforts. For example in 2007, when a shooter was loose on the campus of Virginia Tech, students quickly turned to social media. After the university sent a campus-wide email at 10:16 a.m. on April 16, warning people to stay inside, social media and texting immediately grew,¹⁵¹ with students, families, and friends using social media to determine who was safe by the fact that they were currently using the Internet.¹⁵²

The university, using a traditional communications strategy, held a press conference at noon that day. Campus officials confirmed a final death toll at 2:13 p.m., without individual identification, but online social media sites emerged quickly and compiled information correctly identifying the victims before the university released their names to the public.¹⁵³ This is not to say the university should have done anything different in their release of specific casualty information, but it highlights the power of social media and the public; official statements are no longer being the only way to get information.

¹⁵⁰ FEMA Lessons Learned Information Sharing. *Disaster Recovery*.

¹⁵¹ Leysia Palen, "Online Social Media in Crisis Events," *Educause Quarterly* 20, no. 3 (2008): 76–78.

¹⁵² *Ibid.*

¹⁵³ *Ibid.*

The case studies in the local use of social media section represent the increasing use of social media after a disaster. In addition, they highlight local government's use of the medium and the public's growing acceptance of the communications technology.

B. STATE SOCIAL MEDIA USAGE

After looking at examples of how local agencies are using social media during and after an emergency, the next step is to look at how public information officers at state emergency response organizations across the country using social media after a disaster. This section will look at data gathered from two surveys, one from social media use of emergency response agencies in the Midwest. The second is from the National Association of Chief Information Officers Group on social media usage and will also conduct a case study of the Montana fires in June 2012.

1. Midwestern States Use of Social Media Survey, March 2012

In a March 2012 study of 13 Midwestern states (Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin) and their use of social media,¹⁵⁴ 10 emergency management agencies were using social media—primarily Facebook in their communications efforts. The three states not using social media were Michigan, Missouri, and South Dakota. The interviewees cited using Facebook for a number of purposes, including¹⁵⁵ to: increase awareness; support other partner agencies; assist in preparedness campaigns; conduct media relations; monitor social media; recognize and correct misinformation and conduct contests. It is interesting to note that there is no mention of the use of social media during or after a disaster.

¹⁵⁴ Laurie Boettcher, *Midwest States' Use of Social Media in Emergency Management* (Evanston, IL: Northwestern University), <http://www.slideshare.net/LaurieBoettcher/midwest-states-use-of-social-media-in-emergency-management> (accessed July 28, 2012).

¹⁵⁵ Boettcher, *Midwest States' Use of Social Media*.

2. National Association of Chief Information Officers Group Survey, Summer 2010

During the summer of 2010, the National Association of Chief Information Officers Group implemented a survey of social media adoption by state governments to clarify existing use of social media by states, capture best practices, and extend knowledge of how the tools are being deployed in state governments across the country.¹⁵⁶ The results showed that social media tools are being actively adopted and used throughout state governments across the country.¹⁵⁷ In addition, the results specifically reflect that social media adoption rates are broad across state governments, whether controlled by information officers or not¹⁵⁸. The survey also revealed that two-thirds of the respondents do not have social media policies for their organization.¹⁵⁹ Social media challenges states are facing include security, legal issues, privacy, records management and acceptable use, with 35 percent of the responding states are not currently encouraging broader use of social media.¹⁶⁰ This report did not address crisis communications or the use of social media after a disaster, although that is a situation that will affect all state government participants, from public information-to-information management.

3. Montana—Fire Season, June 2012

In 2012, Montana fire season started at the end of June, with more than 518 fires burning 489,182 acres at a cost of approximately \$28 million dollars.¹⁶¹ Over the course of several weeks, Montana Disaster and Emergency Services (MT DES) assisted in providing resources and information to areas affected by fires. MT DES conducted an

¹⁵⁶ National Association of State Chief Information Officers, “Friends, Followers, and Feeds: A National Survey of Social Media Use in State Government,” NASCIO, <http://www.nascio.org/publications/documents/NASCIO-SocialMedia.pdf> (accessed July 28, 2012).

¹⁵⁷ Ibid.

¹⁵⁸ Ibid.

¹⁵⁹ National Association of State Chief Information Officers, “Friends, Followers, and Feeds.”

¹⁶⁰ Ibid.

¹⁶¹ Montana Disaster and Emergency Services, “State of Montana HSEEP after Action Report Form” (internal document, Montana Disaster and Emergency Services, FT Harrison, MT, 2012).

after action review¹⁶² of the response to the fires and found social media helped alleviate the number of phone calls received at the operations desk. In addition, it was useful in rumor control and helped anticipate needs in the field.¹⁶³ For this incident, social media was vetted through local DES coordinators before it was released. Recommendations from the report include developing a standard operating procedure for using social media during an incident, focusing on information flow and release, and clarifying the roles of the operations desk intelligence collection, social media team, public information officer, and the planning section.¹⁶⁴

The “Montana Fire After Action Report” form provides solid lessons learned and recommendations. In particular the area of the use of social media during and after a disaster. It suggests a standard operating procedure and coordinating efforts across the Joint Information Center communications spectrum.

This section reviewed the use of social media during emergencies at the state level, highlighting that social media is being extensively used, but there is not a concerted effort directed at crisis communications and social media.

C. FEDERAL SOCIAL MEDIA USAGE

Craig Fugate, director of the Federal Emergency Management Agency states, “Communication in and around a disaster is a critical, life-saving part of FEMA’s mission. Social media provides the tools needed to minimize the communication gap and participate effectively in an active, ongoing dialogue.” How are public information officers at federal emergency response organizations across the country using social media after a disaster? This section looks at an Emergency Management Issues Special Interest Group’s input on social media and emergency response and how the U.S. Army Corps of Engineers used social media during the 2011 Bird’s Point Levee disaster in Missouri.

¹⁶² Montana Disaster and Emergency Services, “State of Montana.”

¹⁶³ Ibid.

¹⁶⁴ Ibid.

1. Emergency Management Issues Special Interest Group

The Emergency Management Issues Special Interest Group (EMI SIG) Emergency Public Information Subcommittee used a best practice example from the Department of Energy to show how to be successful incorporating social media into emergency public information programs.¹⁶⁵ It also highlights the need to develop a social media presence before an emergency event and using higher headquarter guidance when establishing social media accounts.¹⁶⁶ Other lessons learned for integrating social media into emergency public information programs were:

- post only pre-approved information to social media,
- use social media as an extension of traditional media,
- develop a social media implementation plan and
- work with senior management and cyber security to mitigate social media access issues and gather and trend social media data.¹⁶⁷

2. U.S. Army Corps of Engineers—Bird's Point Levee, May 2011

The U.S. Army Corps of Engineers (USACE) studied the use of social media during the 2011 flood fight across the nation, and in particular, Bird's Point Levee New Madrid Floodway in Missouri in May.¹⁶⁸ In order to reduce water pressure and flood threats to towns in Illinois, Kentucky, and Tennessee, the USACE faced a difficult period in May 2011 when a decision was made to blow up a floodway established in 1929, the first time that had happened since 1937; the expectation was the flooding of thousands of acres in Missouri.¹⁶⁹ The USACE established the Birds Point New Madrid Floodway

¹⁶⁵ EMI SIG Training Subcommittee, *Incorporating Best Practices/Lessons Learned into Emergency Management Training*, (Washington, D.C.: Dept. of Energy, 2012). <http://orise.ora.gov/emi/training-products/files/LessonsLearnedBestPracticesMay2012.pdf> (accessed November 30, 2012).

¹⁶⁶ Ibid.

¹⁶⁷ Ibid.

¹⁶⁸ Steve Rochette, *USACE Social Media during 2011 Floodfight* (U.S. Army Corps of Engineers, Philadelphia District, 2011).

¹⁶⁹ Ibid.

Joint Information Center Facebook page to help communicate across the spectrum of audiences. From April 29 to May 7, the page captured more than 17,000 “likes.”¹⁷⁰ The Corps used the site to share:

- operational information,
- life and safety information,
- gauges and river crests,
- partner agency information,
- answer thousands of questions,
- monitor developing trends in questions, and
- rumor control.¹⁷¹

The team supporting the Facebook page posted photos of inaccessible areas and photos were shared among the partner agencies, including the Coast Guard, U.S. Geological Services, and the Missouri National Guard. Videos on the page were linked to YouTube and included news conferences and video of the blast.¹⁷² Lessons learned by USACE with the use of social media during the flood fight of 2011 included the power of rumor control, third party credibility, and partner agency interaction.¹⁷³

In this section on federal agency use of social media in an emergency, USACE shows the power of the medium, but federal agencies should increasingly study the benefits and concerns of using social media in crisis communications.

D. INTERNATIONAL SOCIAL MEDIA USAGE

In this global environment, we cannot afford to look just within our nation’s borders to find examples of social media use during and after disasters. With international emergencies being brought into our living rooms, and now onto our mobile devices through social media, it is prudent to look at how social media use overseas might be applied to local, state, and federal public information emergency response. This

¹⁷⁰ Rochette, *USACE Social Media*.

¹⁷¹ Ibid.

¹⁷² Ibid.

¹⁷³ Ibid.

section looks at how Australia has used social media during multiple emergency situations; how Japan used social media after the earthquake and tsunamis in March, 2011; and how Haiti applied social media after the earthquake in January, 2010.

1. Australia—Multiple Disasters, 2010

In Australia, social media is emerging as a prominent means of communications during a disaster. Kim Charton, Executive Director, Media and Public Affairs branch of the Queensland Police Service says they have established a best practice of using social media by a government department for engaging with the public and keeping people informed during a disaster.¹⁷⁴

The Queensland social media strategy focused on public communications and community engagement issues during a difficult period of natural disasters, with more than 90 percent of the state declared in a state of disaster.¹⁷⁵ The Queensland Police Service (QPS) joined the social media communities fairly recently, establishing Facebook, Twitter, and YouTube presences in May 2010.¹⁷⁶ The focus was on three goals: claiming their social media presence, engaging in a two-way conversation with the public, and developing an online community of followers before a disaster occurred.¹⁷⁷ Their third goal, of developing an online community of followers before a disaster occurred, was based on other international examples (such as Mumbai terrorist attacks) where social media dominated mainstream media coverage. However, authorities were not able to contribute or manage it with their own social media presence.¹⁷⁸

¹⁷⁴ Queensland Police Service, Media and Public Affairs Branch, *Disaster Management and Social Media: A Case Study* (Brisbane, Australia: Media and Public Affairs Branch, Queensland Police Service, 2011).
<http://www.police.qld.gov.au/Resources/Internet/services/reportsPublications/documents/QPSSocialMediaCaseStudy.pdf> (accessed July 27, 2012).

¹⁷⁵ Ibid.

¹⁷⁶ Ibid.

¹⁷⁷ Ibid.

¹⁷⁸ Stephanie Busari "Tweeting the Terror: How Social Media Reacted to Mumbai," CNN, November 28, 2008, <http://edition.cnn.com/2008/WORLD/asiapcf/11/27/mumbai.twitter/> (accessed July 7, 2012).

When first established, the QPS social media sites were not highly promoted, which allowed staff to develop skills and procedures with a light volume of interaction. In the beginning phases, only a few employees managed the accounts; however, through the slow growth process, all members of the Media and Public Affairs Branch became social media managers.¹⁷⁹ The slow growth, which facilitated establishing skills and procedures, was useful when Queensland began to experience heavy rain in December 2010 and a disaster was declared. This was the first under new legislation establishing the QPS as the lead agency in the response phase of a disaster.¹⁸⁰

At this point, QPS used the established procedures and was already integrating social media into traditional public communication techniques. The Police Media team continued to issue regular media releases to the mainstream media and post those release to the QPS website; however, they also had established regular processes to add those releases to the Facebook page and to link the releases on Twitter. By mid-January, in a period of two weeks, the amount of people following them on social media doubled.¹⁸¹ The disaster in Queensland expanded with flash flooding and two tropical cyclones in March. Between November and March, the state suffered 37 flood-related deaths.¹⁸²

A Facebook study on the page Cyclone Yasi Update concludes that a mix and balance of official and informal information sources and communication channels is likely to be the best way to enhance emergency management capability.¹⁸³ Empowering individuals and communities to help themselves through provision of accurate, timely, and relevant information and a mechanism to connect with others are fundamental needs

¹⁷⁹ Queensland Police Service, *Disaster Management*.

¹⁸⁰ Ibid.

¹⁸¹ Ibid.

¹⁸² Ibid.

¹⁸³ Mel Taylor, Garrett Wells, Gwyneth Howell, and Beverley Raphael, "The Role of Social Media as Psychological First Aid as a Support to Community Resilience Building: A Facebook Study from 'Cyclone Yasi Update,'" *Australian Journal of Emergency Management* 27, no. 1) (2012): 20–26.

that social media can meet. Self-regulation and careful administration are elements that serve to ensure that the sites that are successful are those that list and support the needs of their users.¹⁸⁴

Like most government organizations, QPS had a well-established process for drafting, clearance, and release of information through the traditional public information practices. During the response phase of an emergency, these processes are largely reactive, based on changing conditions and circumstances; social media became the medium that allowed the communicators to reach the public the fastest. Because most of the information being put out was factual and in the interest of public safety, clearance processes were not necessary and issues were only put through a stringent approval process when further verification was needed or there was the potential of a contentious item.¹⁸⁵

The media support team gravitated toward social media channels because they were the fastest way to distribute public safety information. Within days, the media were using official social media pages as a source of information and were directing citizens to use the social media channels with official tweets appearing on national TV networks and being read by radio announcers within moments of posting.¹⁸⁶

The basic services provided by the QPS Police Media during the timeframe of November 2010 to March 2011 were as a centralized clearing house for disaster-related information through Facebook and Twitter, live video streaming and tweeting of media conferences, press conference summaries, audio updates, rumor control, posting information across the social media platforms, round-the-clock moderation of social media accounts, coordinating translation of press conferences, with Auslan sign language and summaries into other languages for tourist and supporter populations.¹⁸⁷

¹⁸⁴ Taylor et al., “The Role of Social Media.”

¹⁸⁵ Queensland Police Service, *Disaster Management*.

¹⁸⁶ Ibid.

¹⁸⁷ Ibid.

In *Disaster Management and Social Media*, a case study, it states that the reason QPS Police Media was successful was because it had high-level organizational support, including the commissioner and deputy commissioners.¹⁸⁸ Also, the executive director of the Media and Public Affairs Branch emphasized the benefits of social media and set the direction for the team and the public affairs team.¹⁸⁹ The seven-month period between when the social media sites were established and before the first disaster proved to be a valuable period for public officials to become comfortable with social media and embed it as part of daily processes before a disaster occurred. Finally, under the tragic circumstances of having serious flooding and two cyclones, social media quickly proved its worth during disasters.¹⁹⁰

The case study highlighted that social media could immediately push out large volumes of information to large numbers of people ensuring there was no vacuum of official information.¹⁹¹ At the same time, it allowed the QPS Facebook page to become the trusted, authoritative hub for the dissemination of information and facts for the community and the media. Social media provided that large amounts of specific information were directed straight to communities, not having to rely on mainstream media coverage. Through social media, the QPS was able to quickly address rumors and to provide immediate feedback and information from the public. In addition, the mainstream media embraced social media and found it to be a valuable and immediate source of information. Finally, it provided situational awareness for QPS employees in disaster-affected locations who otherwise had no means of communications.¹⁹²

Addressing rumors and misinformation seem to be a large part of social media use, as in addition to the Police Media, the Cyclone Yasi Update team devoted a significant amount of time and effort correcting misinformation, countering rumors, and

¹⁸⁸ Queensland Police Service, *Disaster Management*.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid.

¹⁹¹ Ibid.

¹⁹² Ibid.

validating the accuracy of information.¹⁹³Overall, the QPS social media sites have received positive feedback from government officials the media and directly from citizens. The case study offers these lessons learned from their social media activities:¹⁹⁴

- If you are not doing social media, do it now. If you wait until it is needed, it will be too late.
- Rethink clearance processes. Trust your staff to release information.
- Add a social media expert to your team. While there should be shared responsibility for uploading information and moderating social media sites, expert technical advice and trouble-shooting will be necessary from someone with an information technology background.
- Do not treat social media as something special or separate from normal work processes. It should be integrated as standard practice.
- Do not use social media solely to push out information. Use it to receive feedback and involve your online community.
- Established social media sites are free and robust which can handle volumes of traffic much larger than agency websites.
- Ensure the information is accessible. A PDF is not the most accessible way to deliver information. Machine-readable information, such as geocoding allows the information to be more accessible and usable for others.

2. Japan—Earthquake and Tsunamis, March 2011

The 9.0 scale earthquake that hit Japan on March 11, 2011, at 2:45 PM was not only the strongest in Japan's history but also the fifth largest ever recorded. Tsunamis caused by the tremors devastated most of the coastline and wiped out two towns off the map, claiming the lives of thousands and forcing more than 500,000 people to live in shelters.¹⁹⁵ The Japanese prime minister Naoto Kan declared the incident as the biggest disaster after WWII, with 27,000 people dead or missing; not to mention four explosions in an earthquake hit nuclear facility and extremely high radiation levels in the

¹⁹³ Taylor et al., "The Role of Social Media as Psychological First Aid as a Support to Community Resilience Building," 20–26.

¹⁹⁴ Queensland Police Service, *Disaster Management*.

¹⁹⁵ Acar and Muraki, "Twitter for Crisis Communication."

surrounding areas.¹⁹⁶ Media reported that Twitter was the only communication tool functioned properly immediately after the earthquake.¹⁹⁷

After the Japan earthquake and tsunamis, tweets posted from the disaster struck areas were about warnings, help requests, and reports about the environment and individuals.¹⁹⁸ Tweets from areas not directly affected were somewhat similar and were about reporting the safety of individuals, about the environment, as well as concerns, condolences, and warnings. There were many retweets on the day of the disaster. In Miyagi, an official Twitter account set up by local authorities was used to send out several tsunami warnings and was retweeted many times.¹⁹⁹

There were some problems with the use of social media in the Japanese disaster. Reliability (or lack thereof) was the biggest reported complaint from Twitter users after the Japan disasters. Many users mentioned they could not tell if information was true or false, and this made some people hesitant to use it.²⁰⁰ Another problem was the low signal-to-noise ratio, noting much irrelevant information was tweeted with the #disaster hashtag.²⁰¹ While Twitter was recognized as a more reliable communication tool than television, radio, landlines, mobile phones, and email, there were still some accessibility issues immediately after the disasters. Furthermore, after the disaster, Twitter users recommended improving the reliability of information and the concept of tracing information while still maintaining anonymity²⁰². Users also asked the government be more active in providing timely, reliable information.²⁰³

¹⁹⁶ Acar and Muraki, "Twitter for Crisis Communication."

¹⁹⁷ Ibid.

¹⁹⁸ Ibid.

¹⁹⁹ Ibid.

²⁰⁰ Ibid.

²⁰¹ Ibid.

²⁰² Ibid.

²⁰³ Ibid.

3. Haiti—Earthquake, January 2010

On January 12, 2010 at 4:53 p.m. a magnitude 7.0 earthquake struck Haiti; the strongest quake measured on the island in more than 200 years.²⁰⁴ The earthquake caused widespread damage to the densely populated capital city Port-au-Prince, with an estimated 230,000 killed, 300,000 injured, and more than one million people left homeless.²⁰⁵ Additionally, the major port in the city and the international airport were severely degraded; no shipping could safely enter the port due to collapsed piers and debris. At the airport while the runway was operational, the control tower and support buildings were totally destroyed or unusable.²⁰⁶

According to Yates and Paquette, knowledge sharing was noted as one of the key uses of social media after the Haitian earthquake.²⁰⁷ Knowledge sharing helped organizations internally and across various organizations, eliminating significant duplication of effort.²⁰⁸ As in other disasters, accuracy of information was a challenge in using social media in disaster response and the need for checking and validating, difficult because of the amount of information on social media.

The case study by Yates and Paquette of the 2010 Haitian earthquake concludes social media technologies hold great promise for leveraging public participation in disaster response, and the lessons underscore the advantages for knowledge sharing and reuse.²⁰⁹ The authors assert when properly employed, the benefits of social media are faster decision cycles and more complete knowledge resources.²¹⁰

²⁰⁴ Dave Yates and Scott Paquette, "Emergency Knowledge Management and Social Media Technologies: A Case Study of the 2010 Haitian Earthquake," *International Journal of Information Management* 31, no. 1 (2011): 6–13.

²⁰⁵ Yates and Paquette, "Emergency Knowledge."

²⁰⁶ Ibid.

²⁰⁷ Ibid.

²⁰⁸ Ibid.

²⁰⁹ Ibid.

²¹⁰ Ibid.

This review on the use of social media internationally during or after a disaster further highlights the importance of the medium as part of an overall communications strategy. The co-chair of Australia's National Emergency Management Committee, Roger Wilkins, explained he finds that social media is proving to be a powerful tool in all aspects of emergency management.²¹¹ The unexpectedness and speed at which humanitarian disasters can sometimes strike is often—in these digital times—initially documented and transmitted through the various social media channels by individuals witnessing the crises first-hand and through their friends.

4. Findings

Exploring the case studies on the use of social media in a disaster reveals a diverse collection of experiences, with data ranging from simple screen shots to robustly detailed accounts of individual situations during the disaster. It was exciting to see Fairfax County, Virginia so quickly analyze the social media data from Hurricane Sandy. The speed of that analysis highlights the importance of the medium to leaders in that local jurisdiction (the county is still in recovery phase); yet leaders took the time to provide data that can help others prepare and react to disasters. Queensland and the country of Australia have done an excellent job of laying the groundwork for social media and emergency response research, with an entire journal *The Australian Journal of Emergency Management* (Social Media Edition) devoted to the topic, helping provide a base of knowledge for the path forward.²¹² The case studies reviewed from the local, state, federal, and international perspectives are vital in understanding the full scope of current participation in the social media spectrum. Again, it is important to focus specifically on public information use of the medium related to during or directly after a disaster. The analysis reveals public information practitioners are using social media across the response spectrum, with no data collected on any substantial deterrents to using social media and emergency response indicating the general fear of using social media, from misinformation to legal liabilities, appears to be unfounded.

²¹¹ Yates and Paquette, "Emergency Knowledge."

²¹² *Australian Journal of Emergency Management* (Social Media Edition), 27, no. 1 (February 2012).

IV. ADDITIONAL SOCIAL MEDIA AND EMERGENCY RESPONSE CONSIDERATIONS

Over the past decade, social media has impacted emergency management and disaster response in numerous ways. Emergency management leaders and professionals must begin to accept this impact not as an arbitrary consequence of an uncontrolled disaster but as a tool to help coordinate, manage and facilitate a safe and expected response during emergencies and disasters.

This chapter will look at:

- How the public is using social media.
- What digital volunteerism is and how can it support public information and emergency response?
- How crowd-sourcing is affecting emergency response
- Mobile applications and whether they can support emergency response public information activities
- Social media monitoring and its implications on emergency response.
- Analysis of the findings in this chapter.

A. PUBLIC USE OF SOCIAL MEDIA AFTER AN INCIDENT

With or without input from emergency response leaders, general citizens have become involved in response through social media, as illustrated by the Joplin tornado case study. A prominent blogger on emergency response and social media, Kim Stephens of www.idisaster.com,²¹³ suggests social media fills five functions during an emergency:

- Documentation of event. Members of the whole community are taking photos, videos and sharing stories immediately after an event.
- I'm safe. Social media is being used increasingly to let loved ones know a community member is safe after a disaster.
- Where are friends and family? In addition to letting family and friends know someone is safe, social media can help find loved ones that were affected by the disaster.

²¹³ Stephens, "Mining the Social Media Data Stream."

- Where to get/give help? There is typically an outpouring of support, and a need for that support in the near term after disaster hits. The response in Haiti showed how effective social media can be for those purposes.
- Recovery of lost items. In Joplin, social media was used extensively to help connect citizens with pets and to help locate missing hospital records.

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The American Red Cross has conducted a survey every year since 2010 asking citizens about social media and emergency response. The latest survey, from June 2012, was conducted both online and by telephone with a geographic base of people age 18 and older.²¹⁵ The 2012 survey revealed that social media use has remained stable at 48 percent (as in 2011) with participation in online communities and social networks,²¹⁶ with more than half of those who engage in social media doing so at least once a day. The survey also indicated that respondents with children in the household, college-educated respondents, and younger respondents are more likely to use social media.²¹⁷ Even so, citizens still rely on traditional media as a primary tool for getting information in an emergency with television first, radio second, online news third, and social media and mobile applications tied for fourth place.²¹⁸

Other results of the survey revealed that eight percent of the general public and 10 percent of the citizens surveyed online have used a mobile application to get emergency data, with the most popular applications being weather forecasting, flashlight, first aid, police scanner, and disaster preparedness.²¹⁹ In addition, 12 percent of the general public has used social media to share or get information during an emergency, disaster or severe weather event.²²⁰

²¹⁴Stephens, "Joplin Tornado Demonstrates."

²¹⁵ American Red Cross, *Social Media in Disasters and Emergencies*.

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ Ibid.

²¹⁹ Ibid.

²²⁰ Ibid.

Given the upswing in the use of social media in disasters, the Red Cross describes these citizens as emergency social media users (see Figure 2).²²¹ These emergency social media users look to the medium for weather, road, and traffic conditions, damage caused by the event, the location or status of loved ones, information on how others are coping with the disaster, photographs, and what to do to stay safe. They report to be less likely to seek information about which stores have emergency supplies in stock. Emergency social media users are likely to use social media to share weather conditions, reassurance they are safe, feelings about event, location, actions needed to stay safe, eyewitness descriptions and photos and advice on how others can stay safe and they are less likely to share information about stores or gas stations that have emergency supplies or a video.

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²²¹ American Red Cross, *Social Media in Disasters and Emergencies*.

²²² Ibid.

HOW AMERICANS USE **SOCIAL TOOLS** IN EMERGENCIES

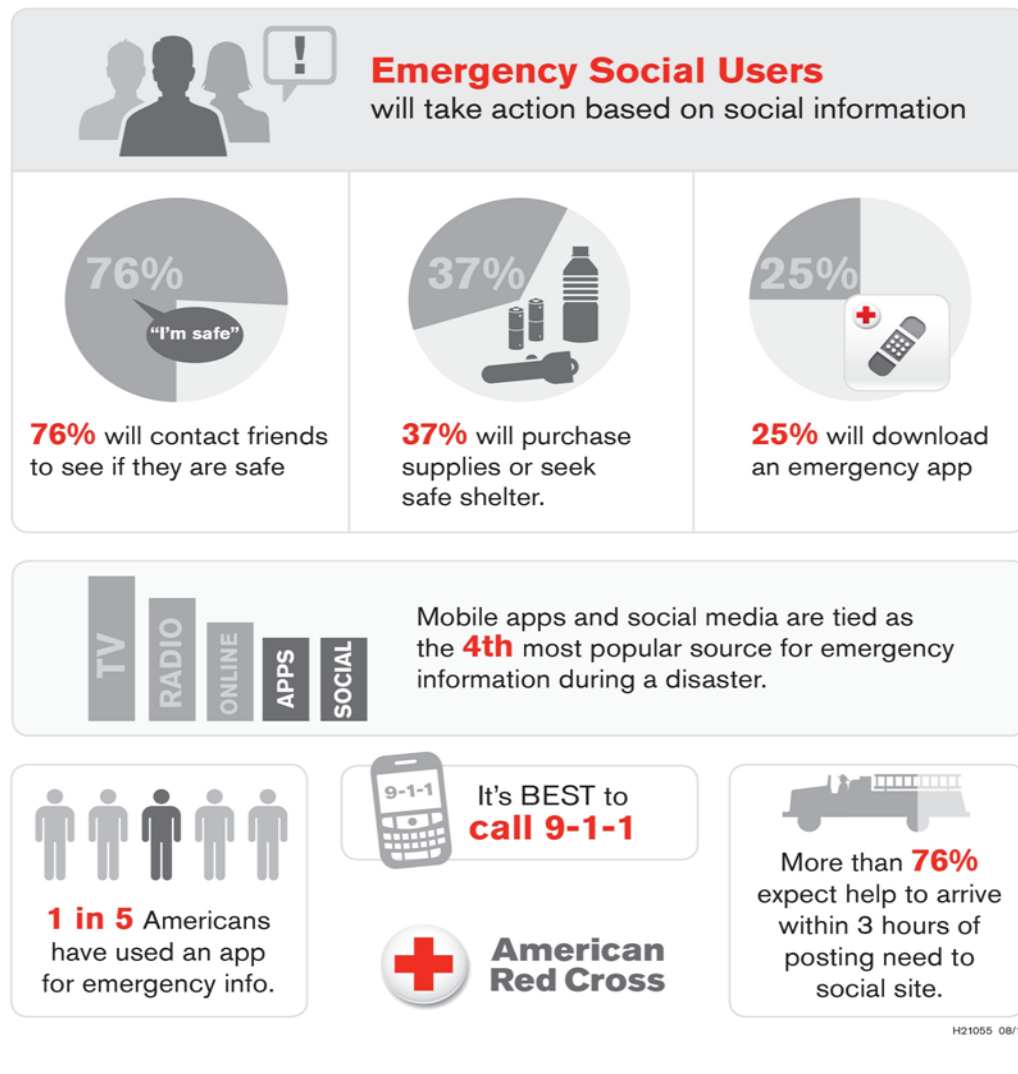


Figure 2. How Americans use Social Tools in Emergencies ²²³

²²³ American Red Cross, "How Americans Use Social Tools in Emergencies," Visual.Ly, <http://visual.ly/how-americans-use-social-tools-emergencies> (accessed February 4, 2013).

Of the emergency social media users, three of four have contacted friends or family members after seeing emergency information on a social media site, primarily to see if they were safe and also to seek shelter and purchase needed supplies.²²⁴ Nearly one third of the online population would try an online channel for help, if unable to reach local emergency management services.²²⁵ Local emergency officials, the news media, and family and friends are the most trusted sources on social media. Four in 10 members of the general public would use social media to let loved ones know they are safe.²²⁶

With an increase in social media use during disaster situations comes an increase in what the general public expects from public officials in a disaster situation, for example at least a third of the general public expecting help to arrive in less than one hour if they post a request for help on a social media website.²²⁷ While the majority in both the online and general populations feels that local emergency response organizations should regularly monitor their websites for emergency requests, roughly half of the general public and 58 percent of the online population doubt that they do.²²⁸ Among the general public, expectations are higher for national emergency response organizations than state or local, as three in four surveyed expect regular monitoring at the national level during an emergency.²²⁹

1. Applications

As citizens become more connected with mobile devices, applications (apps) continue to grow in popularity. Applications are programs designed to run on smart phones and other mobile devices.²³⁰ Americans are becoming increasingly reliant on mobile devices during emergencies to provide information, useful tools and a way to let loved ones know they are safe, according to a new survey conducted by the American

²²⁴ American Red Cross, *Social Media in Disasters and Emergencies*.

²²⁵ Ibid.

²²⁶ Ibid.

²²⁷ Ibid.

²²⁸ Ibid.

²²⁹ Ibid.

²³⁰ Ibid.

Red Cross. Mobile apps now tie social media as the fourth-most popular way to get information in an emergency, following TV, radio, and online news. The Red Cross survey found that 20 percent of Americans said they have gotten some kind of emergency information from an app, including emergency apps, those sponsored by news outlets and privately developed apps.²³¹

Some emergency management organizations have ventured into the application environment. For example, the Tennessee Emergency Management Agency has ReadyTN,²³² and Georgia's Emergency Management Agency has Ready Georgia.²³³ Both applications have similar features including planning tools, alerts, how to react to specific threats, and location-based services able to determine information from current geographic area. There is also an interesting application called PulsePoint,²³⁴ which has the slogan of Enabling Citizen Superheroes, designed for citizens with CPR training to register for alerts when someone in their geographic area is in need of immediate aid.

While the Red Cross still encourages citizens to dial 911 when they need emergency assistance, the organization recognizes the import of mobile applications and has introduced apps for shelter locations, first aid tips, instruction and hurricane preparedness—the last of which also includes a flashlight feature as well as one-touch, “I’m safe” messaging that connects directly to the users’ social media channels.²³⁵

The Federal Emergency Management Agency (FEMA) also has developed an application that allows citizens to:

- check off the items they have in their family’s emergency kit;
- enter family emergency meeting locations;

²³¹ American Red Cross, *Social Media in Disasters and Emergencies*.

²³² “Ready TN—Apps on Android Market” [mobile app], Play Google. November 6, 2012, <https://market.android.com/details?id=org.tema.readytn> (accessed February 15, 2013).

²³³ “Ready Georgia, Get Ready on-the-Go” [mobile app], Ready Georgia, <http://ready.ga.gov/mobileapp> (accessed February 16, 2012).

²³⁴ “Enabling Citizen Superheroes,” Pulsepoint, 2012, <http://pulsepoint.org/app/> (accessed February 16, 2012).

²³⁵ American Red Cross, “More Americans Using Social Media,” 3.

- review safety tips on what to do before, during, and after a disaster;
- view a map of shelters and disaster recovery centers across the United States;
- read FEMA blog posts for up to date information about potential disastrous events.²³⁶

The application was built to work even when there is no mobile service so people can always access the information they need.²³⁷

2. Crowdsourcing and Crisis Mapping

The idea that a crowd of people together can provide information useful to emergency response leaders is being considered at a variety of levels, including the Federal Emergency Management Agency (FEMA). Whether or not leaders utilize social media in emergency response, the general public will use social media, and FEMA Director Craig Fugate said he wants his agency to accept crowd sourcing as an acceptable form of information in an emergency.²³⁸ Crowdsourcing recognizes social media platforms can be powerful tools providing additional sets of eyes and ears to those managing a crisis. While the information is unverified, incomplete, and sometimes inaccurate, it is also instantaneous and from a wide slice of a community. As this information often provides solid situational awareness and an understanding the benefits and limitations, more and more crisis managers are adding crowdsourcing to their operational toolboxes.²³⁹

Crisis mapping is another growing application of technology emerging from the expanding use of crowdsourcing and social media. The Ushahidi Haiti Project was a

²³⁶ Elizabeth Montalbano, "FEMA Launches Mobile Apps for Disaster Preparedness," *Informationweek*, August 26, 2011, <http://www.informationweek.com/government/mobile/fema-launches-mobile-apps-for-disaster-p/231600292> (accessed September 23, 2012).

²³⁷ Ibid.

²³⁸ *Catastrophic Preparedness: How Ready is FEMA for the Next Big Disaster before the U.S. Senate Homeland Security and Governmental Affairs Committee* (testimony of Craig Fugate, Administrator, Federal Emergency Management Agency), Dept. of Homeland Security, March 17, 2011, http://www.dhs.gov/ynews/testimony/testimony_1300365984691.shtm (accessed December 8, 2011).

²³⁹ Tobias, "Using Twitter and Other Social Media," 208–223.

volunteer-driven effort to produce a crisis map after the earthquake in Haiti.²⁴⁰ The project represents the applications of crisis mapping and crowd sourcing to large-scale disasters—a new approach to the rapidly evolving field of crisis informatics. Ushahidi, meaning “testimony” in Swahili, was originally created during 2007–08 Kenyan post-election violence by a network of volunteers and powered by a community of citizen reporters and bloggers. It was designed to give everyday Kenyans a way to report incidents of violence that they saw by using mobile technology. Also in its design was the ability to archive news and reports to create a historical record of the conflict and provide the Kenyan community with up-to-date information about the violence.²⁴¹ The Ushahidi platform enabled Kenyan citizen journalists to upload information with detailed eyewitness reports, including geo-coordinates and time stamps. This resulted in a detailed crowd-sourced map of events on the ground.²⁴² After its use in Kenya, Ushahidi’s founders recognized the tool had wider potential and developed more advanced versions of the free, open-source platform.

On January 12, 2010, a 7.0 magnitude earthquake struck Haiti. More than 230,000 people died, and some of Haiti’s most populous areas suffered mass destruction.²⁴³ The international community responded immediately to launch extensive search and rescue missions and provide emergency assistance. Ushahidi provided a way to capture, organize, and share critical information coming directly from Haitians. Information was gathered through social media and text messages sent via mobile phones. Approximately 85 percent of Haitian households had access to mobile phones at the time of the earthquake, and these phones were the most direct means of communication for Haitians during the crisis and emerged as “a lifeline for many survivors.”²⁴⁴ Reports about trapped

²⁴⁰ Chrissy Martin, “Ushahidi Haiti Project Evaluation Final Report,” <http://blog.ushahidi.com/index.php/2011/04/19/ushahidi-haiti-project-evaluation-final-report/> (accessed December 19, 2011).

²⁴¹ Jessica Heinzelman and Carol Waters, *Crowdsourcing Crisis Information in Disaster-Affected Haiti* (Washington, D.C.: U.S. Institute of Peace, 2010).

²⁴² Heinzelman and Waters, *Crowdsourcing Crisis Information*.

²⁴³ Yates and Paquette, *Emergency Knowledge Management*, 6–13.

²⁴⁴ Heinzelman and Waters, *Crowdsourcing Crisis Information*.

persons, medical emergencies, and specific needs, such as food, water, and shelter, were received and plotted on maps that were updated in real time by an international group of volunteers. These reports, including geographic information, were available to anyone with an Internet connection. Responders on the ground soon began to use them in determining how, when, and where to direct resources with the most significant challenges being verifying and sorting the large volume of reports.²⁴⁵

The all-volunteer crisis-mapping team supporting the Haiti earthquake searched social media sources, including Twitter, Facebook, and blogs, and traditional media to identify actionable pieces of information that could be of use for responders on the ground. If a piece of information was deemed useful and had a location attached to it, volunteers would find the Global Positioning System (GPS) coordinates through Google Earth and OpenStreetMap and map it for anyone to view and utilize. Through the aggregation of individual reports, the crisis mappers were able to identify clusters of incidents and urgent needs, helping responders target their response efforts.²⁴⁶ Over the course of the effort, 4,636 project volunteers translated 25,186 text messages and numerous e-mail, web, and social media communications, resulting in 3,596 reports that were actionable and included enough relevant information to be mapped on Ushahidi.²⁴⁷

As Ushahidi collected reports, the resulting information feed was being used by organizations such as the U.S. Federal Emergency Management Agency (FEMA) and the U.S. military. Craig Fugate, FEMA director, expressed his gratitude for the information in a “tweet”: “The crisis map of Haiti represents the most comprehensive and up-to-date map available to the humanitarian community.”²⁴⁸

A study of the Ushahidi Haiti project offers these recommendations:

- Crisis-mapping deployments should leverage local knowledge and response capacity by working with in-country community-based organizations as both providers and consumers of crowd-sourced data.

²⁴⁵ Heinzelman and Waters, *Crowdsourcing Crisis Information*.

²⁴⁶ Ibid.

²⁴⁷ Ibid.

²⁴⁸ Martin, “Ushahidi Haiti Project Evaluation.”

- Disaster preparedness programs and emergency disaster response organizations should integrate mobile phone-enabled crowdsourcing into information-gathering and communication systems and proactively build trusted networks of verified reporters in the case of emergency.
- Collaboration on the creation of accurate maps does not need to wait until disaster strikes. Governments, international organizations, non-governmental organizations, and mapping enthusiasts should combine efforts to consolidate information within established maps, to keep geographic information current, and to lay the foundation for key disaster-related services that will be useful in case of emergency.
- Analytic tools should be developed and integrated into crisis-mapping platforms to automatically identify and detect early warning signs of conflict.
- Additional research needs to be conducted to understand how best to communicate mobile-reporting instructions to populations. Effective messaging will include information on how to submit information that is actionable and locatable as well as instill confidence in individuals that reports of sensitive issues will be kept confidential.²⁴⁹

At the International Conference on Crisis Mapping 2010, the Standby Task Force was launched because live maps were becoming increasingly important to organizations in the humanitarian, human rights, election-monitoring, and media space. Most of these organizations do not have the bandwidth to dedicate resources to create live maps, nor do they have access to a skilled volunteer community for support. Thus, the Standby Task Force was created to provide volunteer, dedicated, live-mapping support to help meet the four key components of crisis mapping: information collection, visualization, analysis and response.²⁵⁰ The Standby Task Force is generally activated in two types of crisis: a humanitarian emergency declared under the International Charter Space and Major Disaster or a political situation that may lead to a major humanitarian disaster.²⁵¹

²⁴⁹ Martin, "Ushahidi Haiti Project Evaluation."

²⁵⁰ "Introducing the Standby Task Force," Standby Task Force, <http://blog.standbytaskforce.com/about/introducing-the-standby-task-force/> (accessed February 12, 2012).

²⁵¹ "Activation Criteria," Standby Task Force, <http://blog.standbytaskforce.com/about/activation-criteria/> (accessed February 12, 2012).

Emergency response organizations, like Fairfax County, Virginia after Hurricane Sandy, are using crowdsourcing to better support citizens during emergency response and recovery operations, it is important to recognize this capability and leverage it for citizen support.

3. Digital Volunteerism

In early 2011, Jeff Phillips, Emergency Management Coordinator in Los Ranchos de Albuquerque, New Mexico, developed the concept of Virtual Operations Support Teams (VOST). VOST integrates “trusted agents,” or trusted volunteers, into emergency response operations by creating a virtual team that focuses on the establishment and monitoring of social media communication, managing communication channels with the public, and handling matters that can be executed remotely through digital means such as the management of donations or volunteers.²⁵²

VOST was put into practice in the Mt. Washington Wilderness after the Shadow Lake Fire began on August 28, 2011. The fire grew to over 10,000 acres and resulted in the evacuation of the Big Lake Recreation Area, coming under control in mid-September.²⁵³ When Kris Eriksen, the Public Information Officer (PIO) for the National Incident Management Organization (NIMO) Portland Team, was called to the Shadow Lake Fire on August 31, 2011, she was aware of the VOST and wanted to implement a team to help overcome some communication challenges.²⁵⁴

The Shadow Lake VOST members had a combination of strong technical skills, social media knowledge, and emergency management experience. Volunteers resided in different locations across the United States, and, consequently, relied on digital interaction. The team began with a vision of the work that would include classic public

²⁵² Lise Ann St. Denis, Amanda L. Hughes, and Leysia Palen, *Trial by Fire: The Deployment of Trusted Digital Volunteers in the 2011 Shadow Lake Fire*, Proceedings of the 9th International ISCRAM Conference, Vancouver, Canada, April 2012).

²⁵³ Ibid.

²⁵⁴ Ibid.

information officer activities of media monitoring, management of the public's concerns, communication of the fire fighters' progress, and representation of the public's concerns.

The task list included:²⁵⁵

- Follow social media and traditional media trends and report back what you are seeing
- Communicate issues and concerns being expressed by the public
- Identify misinformation or angry postings that need to be corrected or dealt with
- Provide a supportive voice for the NIMO team and its efforts through social media
- Push out key message each day (via personal and official Twitter accounts)
- Post and tweet messages from private accounts with information from @ORfireInfo accounts
- Represent the citizen's perspective
- Compile media coverage (traditional and non-traditional) by date
- Document the social media conversation—especially if something big happens
- Take this opportunity to learn new tools and try new things
- Document the experience of participating as a VOST member

While using a variety of tools to watch, listen, and archive the social media conversations, VOST members were instructed to notify the public information officer directly with any negative coverage, irritated stakeholder groups, or citizen concerns that required direct attention. Quick Reference (QR) codes were used on printed business cards to further merge time-tested techniques with emerging technology and emphasize the technical, integrated response.²⁵⁶

One of the benefits of a team of trusted digital volunteers is the potential to offer additional coverage to what a local emergency management team can provide. An additional benefit of the model is that it is located outside of the impact area, and, therefore, volunteers were not affected by power outages, adverse weather conditions, or

²⁵⁵ St. Denis, Hughes, and Palen, *Trial by Fire*.

²⁵⁶ Ibid.

other service disruptions. Furthermore, with team members working from different time zones, they were able to provide an added level of monitoring beyond the waking hours at the emergency site.²⁵⁷

The VOST implementation also raised several concerns, such as legal liability, logistical management, and the relationship with the public information officer. However, despite any concerns, digital volunteerism is another tool that can help emergency response organizations better support citizens during emergency operations. With proper organization, training, and coordination, it can multiply the response capabilities of an organization.

4. Social Media Monitoring

Community and emergency response leaders can and are using social media to find real-time information during emergencies, providing a common operating picture from which decisions can be made by utilizing the information available on social media during and after a disaster. As an example, the Missouri National Guard began actively monitoring social media sites during flood response state emergency duty on the Mississippi River in March 2011.²⁵⁸ The task force commander fielded several questions from state leadership that had been generated by information gleaned from social media sites. He decided to monitor social media as an active task in his tactical operations center.²⁵⁹ Interestingly, the task force's social media monitoring techniques have gained interest of many organizations.²⁶⁰

²⁵⁷ St. Denis, Hughes, and Palen, *Trial by Fire*.

²⁵⁸ Bill Phelan, "National Guard Monitors Social Media as Part of Flood Response Mission," Missouri National Guard, April 29, 2011, <http://www.moguard.com/04-29-11-national-guard-monitors-social-media-as-part-of-flood-response-mission.html> (accessed January 17, 2012).

²⁵⁹ Bill Phelan, "British Hope to Learn Lessons from National Guard Disaster Response" Missouri National Guard, June 25, 2011, <http://www.moguard.com/06-25-11-british-hope-to-learn.html> (accessed January 18, 2012).

²⁶⁰ Ibid.

Many elements of our nation's leadership, including Congress, are wondering how to best use the emerging trends in social media.²⁶¹ A recent report from the Congressional Research Service stated that emergency responders must figure out how to best use this technology during emergency response to disasters.²⁶² The Department of Homeland Security has been actively monitoring social media sites since February 2011. This program has drawn concern from House of Representative leadership from the House Subcommittee on Counterterrorism and Intelligence;²⁶³ the concern being federal government could be overreaching its authority in monitoring the communications of private citizens.²⁶⁴

The Office of Operations Coordination and Planning, the DHS office overseeing the social media initiative, references federal law and the Homeland Security Act. This act requires the National Operations Center to provide situational awareness and establish a common operating picture for the entire federal government, and for state, local and tribal governments to ensure critical disaster-related information reaches government decision makers.²⁶⁵

When monitoring social media, Personally Identifiable Information (PII) is an issue that must be considered and addressed. Department of Defense Directive 5400.11, para E2.e and 5400.11-R, para DL1.14 defines PII as:

Information about an individual that identifies, links, relates, or is unique to, or describes him or, e.g. a social security number; age; military rank;

²⁶¹ "Congress Pressing DHS for Greater Monitoring of Social Media," Public Intelligence, January 14, 2012, <http://publicintelligence.net/congress-pressing-dhs-for-greater-monitoring-of-social-media/> (accessed February 16, 2012).

²⁶² Lindsay, *Social Media and Disasters Current Uses*.

²⁶³ "Congress Pressing DHS for Greater Monitoring of Social Media."

²⁶⁴ Neal Ungerleider "Department of Homeland Security Tells Congress Why it's Monitoring Facebook, Twitter, Blogs," February 16, 2012, <http://www.fastcompany.com/1816814/departement-of-homeland-security-explains-social-media-monitoring-project-to-congress> (accessed February 16, 2012).

²⁶⁵ Office of Operations Coordination and Planning, U.S. Dept. of Homeland Security, *Publicly Available Social Media Monitoring and Situational Awareness Initiative Update* (Washington, D.C.: U.S. Dept. of Homeland Security, 2011).

civilian grade; marital status; race; salary; home/office phone numbers; other demographic, biometric, personal media, and financial information, etc.²⁶⁶

In civilian terms, PII is information that can be used to distinguish or trace an individual's identity.

DoDD 5200.27, para 3.31 states:

DoD policy prohibits collecting, reporting, processing or storing information on individuals or organizations not affiliated with the Department of Defense, except in those limited circumstances where such information is essential to the accomplishment of the DoD mission outlined below.²⁶⁷

Although PII is legally required to be protected, the difficulty is that it is one of the backbones of the “social” aspect of social media. Social media is used to communicate with individuals or group with whom a person choose to associate. Inherent in that communication is that a person knows with whom she or he is communicating. The Department of Homeland Security has a defined area in which PII may be used in conjunction with the Publically Available Social Media Monitoring and Situational Awareness Initiative. It states that PII can be collected and disseminated during certain narrowly tailored categories, such as a situation involving potential life or death.²⁶⁸

The existing social media conversation will grow exponentially during an emergency or disaster and will occur whether local emergency managers acknowledge it or not. There are a variety of monitoring tools that are free and sufficiently dynamic to search for certain terms, concepts and associations to determine how the public is discussing certain issues. Using these tools ultimately will lead to more effective communications with the public regarding an incident.²⁶⁹

²⁶⁶ U.S. Dept. of Defense, *DoD Directive 5400.11 DoD Privacy Program* (Washington, D.C.: U.S. Dept. of Defense, 2007).

²⁶⁷ Ibid.

²⁶⁸ Office of Operations Coordination and Planning, *Publically Available Social Media Monitoring*.

²⁶⁹ Crowe, “The Social Media Manifesto,” 409–420.

B. FINDINGS

This section has looked at a variety of concepts that are improving real-time collaboration: digital volunteerism, crowd sourcing, applications, and social media monitoring—all using technology in ways that would have been inconceivable only a short time ago. There are leaders in emergency management that are willing to be innovative in the area of social media technologies and that leadership will ensure the homeland security enterprise remains part of the social media conversation. The tools analyzed are already valuable resources. Their use will expand as emergency management professionals learn more about these systems and creatively apply their uses to current response systems in joint information centers, emergency operations centers, and other aspects of supporting citizens during a disaster.²⁷⁰ It is equally important for homeland security and emergency response leaders, and in particular the public information practitioners, to remain engaged in these technologies to help determine what emerging trends might add value to the support of our citizens and communities in a time of disaster. This is a future of emergency management.

²⁷⁰ Crowe, “The Social Media Manifesto,” 409–420.

V. FINDINGS, CONCLUSION AND RECOMMENDED IMPLEMENTATION

This thesis has researched public information use of social media in crisis communications during and directly after a disaster. The problem was looked at through the lens of researcher with 18 years of public affairs experience, beginning as an enlisted soldier and working through the ranks until becoming the Missouri National Guard's state public affairs officer. As a public affairs officer, I support more than 11,500 citizen-soldiers and airmen across the state, serve as an advisor to the adjutant general, and have gained extensive crisis communications experience during events including the Joplin tornado, aircraft accidents, combat casualties, and state emergency duties.

Social media became a part of my world in 2009, when adjutant general, Maj. Gen. Steve Danner, challenged me to get our organization involved. Like many others working on the secure networks employed by the homeland security enterprise, the first time I went to Facebook, I got a large, blinking warning about misuse of government property. I've faced and overcome many challenges on the social media spectrum and, at times, felt like the results were not worth the effort. I also experienced that, when engaging in social media use, public information practitioners like myself are doing so by walking on a tightrope high above a churning sea of uncertainty, with many people watching the struggle from the safety of the ground. Some are anxiously waiting the imminent fall. This thesis concentrates on that area where public information practitioners are working in social media, often without any guidance. I would like that feeling of life-threatening tightrope to be more like the Skywalk at the Grand Canyon—a scary, breathtaking experience but with every expectation of survival.

To that end, this thesis has looked at the current literature on social media and emergency management, specifically related to crisis communication after a disaster.

The researcher also reviewed existing social media policies and the level of guidance they provide on crisis communications and how social media are being used in emergency situations and other factors affecting social media and emergency response, with findings analyzed for each area.

Social media are growing parts of the national conversation. This conversation is happening on digital platforms that many leaders in emergency response agencies are uncomfortable with and do not use themselves. There is a language to social media that can further alienate those not using them on a consistent basis. When there is a conversation happening in an unfamiliar area in a confusing language, there is the temptation to ignore that conversation. But this conversation involves citizens and affects every aspect of the homeland security enterprise, in particular, the emergency response agencies of the enterprise. So, leadership and practitioners must overcome any personal or organizational fears and biases against social media. Leaders must understand and embrace social media so that they can be leveraged to ensure the best support possible to our citizens and communities.

The topic of social media is immense, both to the active user, as well as to the passive observer. Trying to look at the mountain of information and make informed decisions can be overwhelming. This thesis focuses specifically on policies and case studies of public information integration of social media and emergency response during and immediately after an emergency, but there were a plethora of additional specific subjects that could have been the emphasis. For example:

- How should social media be incorporated into emergency operations center, both for internal and external communications?
- What is the path forward for social media monitoring; is it appropriate and useful at the local levels, similar to the federal level efforts?
- Mobile technology has changed where we communicate; is the homeland security enterprise prepared to support that new community need during a disaster with communications support like signal and battery charging?
- Applications are being developed at all levels; are they being used by citizens, or are we creating another icon to be ignored on our little phone screens?
- Is there a better direction for limited planning resources, or are they an effective way to engage the public in the whole community response?

The power and reach of the crowd is becoming stronger with each day, from crisis mapping to the ability for a public, online outcry to cancel the New York City marathon. The crowd now has the ability to organize and be heard on many levels, including the international media stage. How can homeland response harness that energy to ensure

leaders have every advantage when making decisions that will affect the crowd? Oftentimes, the public creates a social media presence in support of a disaster response. Is that counter-effective to the official emergency response or can the two be integrated? What are the liabilities for emergency response agencies participating in social media? For example, what if there is a request for emergency help on an official Facebook page that is missed, and that person dies?

In the policy analysis, it became evident that not all agencies active in social media have a policy to support that activity. The policies that do exist range from one page documents to more than 50 pages and cover everything from the establishment of a page to the archiving of data to meet state regulations. It became important to focus on items specifically related to using social media during crisis communication because, while most aspects of the use of social media during normal operations can be applied to an emergency situation, there are aspects that must to be tweaked to meet disaster-specific requirements. For example, while it is typically appropriate to leave an office in the afternoon and not check the organizational social media presence until the next morning, during an emergency there needs to be constant monitoring, both to assist with any questions and to monitor for rumor control aspects. There was some significant inclusion of crisis communications issues in the Department of Defense and Wellington, New Zealand documents, but largely the policies were void of guidance on communicating during and immediately after a disaster. This is particularly worrisome at the local level because every disaster response starts at the local level. Those public information practitioners are the tip of the sword in ensuring an accurate consistent message is shared across all platforms and to all audiences.

Exploring the case studies on the use of social media in a disaster revealed a diverse collection of experiences, with data ranging from simple screen shots to robustly detailed accounts of individual situations during the disaster. It was exciting to see Fairfax County, Virginia so quickly analyze the social media data from Hurricane Sandy. The speed of that analysis highlights the importance of the medium to leaders in that local jurisdiction. That county is still in recovery phase, yet took the time to provide data that can help others prepare and react to disasters. Queensland and the country of

Australia have done an excellent job of laying the groundwork for social media and emergency response research, with an entire journal devoted to the topic, helping provide a base of knowledge for the path forward.²⁷¹ The case studies from the local, state, federal, and international perspectives are vital in understanding the full scope of current participation in the social media spectrum. It is again important to focus specifically on public information use of the medium related to during or directly after a disaster. The analysis reveals public information practitioners are using social media across the response spectrum, with no data collected on any substantial deterrents to using social media and emergency response, indicating the general fear of using social media, from misinformation to legal liabilities, appears to be unfounded.

Looking at additional social media and emergency response considerations exposed us to a variety of concepts that are improving real-time collaboration, digital volunteerism, crowd sourcing, applications, and social media monitoring, all using technology in ways that would have been inconceivable only a short time ago. There are leaders in emergency management that are willing to be innovative in the area of social media technologies, and that leadership will ensure the homeland security enterprise remains part of the social media conversation. The tools analyzed are already valuable resources and will expand as emergency management professionals learn more about these systems and creatively apply their uses to current response systems in Joint Information Centers, Emergency Operations Centers and other aspects of supporting citizens during a disaster.²⁷² It is equally important for homeland security and emergency response leaders, and in particular the public information practitioners, to remain engaged in these technologies to help determine what emerging trends might add value to the support of our citizens and communities in a time of disaster, this is a future of emergency management.

This research concludes there is a disparity between what is expected of emergency response agency communicators and the guidance provided to them to meet

²⁷¹ *Australian Journal of Emergency Management.*

²⁷² *Ibid.*

the needs of citizens and organizations in a time of disaster. This gap between policy and action leaves room for miscommunication and inconsistencies and must be addressed. Social media are widely used by the public and the emergency response community, during both normal operations and emergencies. There is a growing body of social media policies at the local, state, federal, and international levels, although one aspect these policies lack is guidance on using social media during crisis communications, during, and immediately after an emergency.

In order to help fill the gap of information in the lack of social media policies and to address the limited crisis communication guidance included in existing social media policies, the following template was created to be used by public information officers of emergency response organizations working at the local, state, federal, or international levels.

A. SOCIAL MEDIA POLICY TEMPLATE

This document is designed to provide a basic social media policy template to offer guidance and establish parameters as an organization engages in the social media environment. The policy recommendation includes the following aspects of social media:

- Strategic goal
- Usage by employees
- Transparency
- Audiences
- Naming and logo conventions
- Terms of service
- Platforms
- Site registration
- Standard operating procedures
- Crisis communications

Missouri National Guard (insert your organization) Social Media Strategic Goal: The Missouri National Guard (insert your organization's name) understands the

importance of leveraging social media as a means to support the organization's mission, vision and values. This is the official social media policy for the Missouri National Guard (insert your organization's name). The Missouri National Guard Public Affairs Office (insert your organization's appropriate office) provides primary oversight of social media usage for the organization and should be contacted with for any information not covered in this policy.

Social media use by Missouri National Guard (insert your organization) employees. Any member of the Missouri National Guard (insert your organization's name) using social media as a tool to meet the mission, vision, and values of the Missouri National Guard must have the social media presence approved by the State Public Affairs Office. The Missouri National Guard (insert your organization's name) realizes that many members use social media in their capacity as a private citizen and recommends they follow these three guidelines for successful not interfering with organization membership:

- Maintain the proper security settings in your social media accounts.
- Do not associate your page with the Missouri National Guard (insert your organization's name) unless you are certain your page meets the organizations policies.
- Do not participate in or conduct conversations that would not meet the policies of the Missouri National Guard (insert your organization's name).

Any issues that arise from an employee not following the three guidelines will be directed to the members' chain of command, with support from the public affairs office.

Missouri National Guard (insert your organization) Transparency in Social Media: Whenever the Missouri National Guard (insert your organization's name) engages in social media, it must be entirely clear and transparent that it is organizational communication.

Missouri National Guard (insert your organization) Social Media Audiences: The Missouri National Guard (insert your organization's name) uses social media, integrated with traditional communications tools, to reach our audiences:

1. Community members

2. Employees/Guard members
3. Families of employees/Guard members
4. Local, state and federal elected officials
5. Similar or supporting organizations
6. Higher headquarters organizations
7. Traditional media organizations
8. Retirees

Missouri National Guard (insert your organization) Social Media Naming and Logo conventions: Before initiating organizational social media presences, determine the logos and abbreviations to be used across the platforms for consistent messaging in support of communications strategy. Remember that many of the social media sites have length restrictions so often shorter is better. Also, ensure your chosen abbreviations do not have alternate meanings. The Missouri National Guard abbreviations are MONG, MoGuard, Missouri NG, in hindsight, these would be limited to just one abbreviation. Another way to ensure consistent messaging across the various social media and communications platforms is to use a similar logo on the different sites. Many sites have shape limitations of square or rectangular, so consider that when developing the cross platform design.

Missouri National Guard (insert your organization) Social Media Terms of Service:

The following terms of service and guidance was established to ensure the Missouri National Guard remains compliant with AR 360-1, AR 530-1 and AFI 35-101. By posting these terms of service notes on your social media sites, administrators can assure that all sites remain in regulation.

General Terms of Service

- These platforms contain e-mail services, wall posts, messages, notes, blogs, chat areas, news groups, forums, communities, personal Web pages, calendars, photo albums, videos, and/or other message or communication facilities designed to enable communication activities.

- Those who use the Missouri National Guard's social media platforms must do so only to post, send and receive messages and material that are proper and, when applicable, related to the particular social media platform.
- By way of example, and not as a limitation, you agree that when using the organizational social media, you will not:
- Use in connection with surveys, contests, pyramid schemes, chain letters, junk email, spamming, or any duplicative or unsolicited messages (commercial or otherwise).
- Defame, abuse, harass, stalk, threaten, or otherwise violate the legal rights (such as rights of privacy and publicity) of others.
- Publish, post, upload, distribute, or disseminate any inappropriate, profane, defamatory, obscene, indecent or unlawful topic, name, material, or information.
- Upload, or otherwise make available, files that contain images, photographs, software or other material protected by intellectual property laws, including, by way of example, and not as limitation, copyright or trademark laws (or by rights of privacy or publicity) unless you own or control the rights thereto or have received all necessary consent to do the same.
- Use any material or information, including images or photographs, which are made available through the services in any manner that infringes any copyright, trademark, patent, trade secret, or other proprietary right of any party.
- Upload files that contain viruses, Trojan horses, worms, time bombs, cancelbots, corrupted files, or any other similar software or programs that may damage the operation of another's computer or property of another.
- Advertise or offer to sell or buy any goods or services for any business purpose, unless such the organization specifically allows such messages.
- Download any file posted by another user of a social media platform that you know, or reasonably should know, cannot be legally reproduced, displayed, performed, and/or distributed in such manner.
- Falsify or delete any copyright management information, such as author attributions, legal or other proper notices or proprietary designations or labels of the origin or source of software or other material contained in a file that is uploaded.
- Restrict or inhibit any other user from using and enjoying the social media platform.
- Violate any code of conduct or other guidelines that may be applicable for any particular social media platform.

- Harvest or otherwise collect information about others, including email addresses.
- Violate any applicable laws or regulations.
- Create a false identity for the purpose of misleading others.
- Use, download or otherwise copy, or provide (whether or not for a fee) to a person or entity any directory of users of the platform or other user or usage information or any portion thereof.

Links to any third party site

- Links on this site may let you leave the organization's website. The linked sites are not under the control of the organization and the organization is not responsible for the contents of any linked site or any link contained on a linked site, or any changes or updates to such sites.
- The organization is not responsible for webcasting or any other form of transmission received from any linked site.
- The organization provides links to you only as a convenience, and the inclusion of any link does not imply endorsement of that site.

Operational Security (OPSEC)

- Operational security (OPSEC) includes any classified information including, but not limited to, the movement of soldiers in and out of theaters of operation, current and ongoing military operations, or tactics, techniques and procedures poses a security risk to soldiers or families.
- This is a public website and as such there is no way to control whoever may view the information that is posted.

Materials provided to the Missouri National Guard posted at any Missouri National Guard Website

- The organization does not claim ownership of the materials, including feedback and suggestions, you post, upload, input, or submit to any social media platform for review by any audiences.
- However, by posting, uploading, inputting, providing, or submitting your submission, you are granting the organization permission to use your submission in connection with communications of the organization including, but not limited to, the license rights to: copy, distribute, transmit, publicly display, publicly perform, reproduce, edit, translate, and reformat your submission; and to publish your name in connection with your submission.

Missouri National Guard (insert your organization) Social Media Platforms:

The following is a list of Missouri National Guard (insert your organization) social media platforms with a short description:

Blog: www.moguard.com/blog

The Missouri National Guard's command blog platform for senior leaders to interact with Soldiers, Airmen, Family members and the community at large. Topics include new programs, regulations, operations, and training tips among others, the blog is interactive and allows Soldiers and Airmen to speak directly with their senior leaders.

Facebook: www.facebook.com/Missouri.National.Guard

The public affairs office updates the organizational Facebook page twice a day during normal operations. Posts include photos, videos, Guard-produced articles, articles from throughout the Department of Defense and a wide variety of media sources. Posted products either features or has a direct impact on Missouri National Guard soldiers, airmen and family members. Facebook offers the organization a chance to have a conversation with its members and public. Only items that specifically violate terms of use will be deleted.

Twitter: www.twitter.com/Missouri_NG

During normal operations, the organization produces, on average, four tweets each day. Tweets are 140-character messages that often include a shortened Web link; they are a good way to get information out quickly and are particularly useful for crisis communication.

Flickr: www.flickr.com/photos/missouriguard/

Flickr is the primary method the Missouri National Guard distributes images. All audiences, including employees, media, and the general public have direct access to images of the organization.

YouTube: www.youtube.com/MoNationalGuard

YouTube is the video sharing and distribution site for the Missouri National Guard. Videos are typically under two minutes to meet the attention span of the audiences.

Pinterest: www.pinterest.com/monationalguard

Pinterest is an emerging social media that offers another outlet to reach our diverse audiences. The organization uses Pinterest to share photos and logos of organizational activities.

Next social media platform(s): The organization watches social media trends and is ready to join emerging platforms to determine if usage supports the mission, vision, and values of the organization.

Missouri National Guard (insert your organization) Social Media Registration:

1. All administrators of an official page must complete social media information awareness training. <https://IA.SIGNAL.ARMY.MIL/SMS.ASP>
[HTTP://IASE.DISA.MIL/ETA/SNS_V1/SN/LAUNCHPAGE.HTM](http://IASE.DISA.MIL/ETA/SNS_V1/SN/LAUNCHPAGE.HTM)
2. All pages must be registered with the Department of Defense:
<http://www.defense.gov/registered/sites/SocialMediaSites.aspx>
3. All unit and program pages must be approved by and registered with the Missouri National Guard Public Affairs Office. This may currently be done through e-mailing the following information to the public affairs office with the subject line “SOCIAL MEDIA REGISTRATION.” The following information is needed:

Unit or program name and page link
Administrator(s) name
Administrator(s) contact info (e-mail and phone number)
Information awareness certificates
Department of Defense social media registration

Missouri National Guard (insert your organization) Social Media Standard Operating Procedures:

The Missouri National Guard Public Affairs Office (insert your organization’s name) will utilize social media to meet the mission, vision, and values of the organization, creating additional avenues for communication—maximizing information dissemination, usage, communication, and feedback and generate visits to our home website and other social media sites.

Social Media Managers Responsibilities:

Timely dissemination of approved social media content:

- Weekly: Blog
- Daily: Facebook, Pinterest
- More than once daily: Twitter
- As needed: Flickr

Monitoring and information accuracy of social media sites:

- All queries should be answered through the same medium submitted (for example, on the Facebook wall or by private message) within one working day.
- Any posts that violate the terms of service should be removed within one working day.
- Negative comments will not be removed unless they violate the terms of service.

Missouri National Guard (insert your organization) Social Media Crisis Communications:

When faced with a crisis, typically State Emergency Duty for the Missouri National Guard, the need for effective communications increases dramatically. All of the social media policies that are followed in normal operations are still in place, but must be adjusted to allow for effective crisis communications.

Baseline Site: Because of the rapid pace of communication in a crisis, you must establish a baseline site for information. This helps avoid important information being pushed out of easy access too quickly due to a high volume of posts on social media sites. The baseline site can be an existing Web page or blog site, or a Web page or blog site

established specifically for that emergency. All official social media postings should reference back to the established baseline site to ensure continuity of information for the diverse audiences of the Missouri National Guard.

24-hour operations: During normal operations, a single working day turn around on information sharing is acceptable. During crisis communications the pace of

information increases and because of round-the-clock nature of the new news cycle and social media, public information practitioners must be prepared to support the information needs of social media on a 24-hour a day basis. Depending on the extent of the crisis, that support can be supported through technology like smart phones or laptops, or the public information office can establish a 24-hour work shift for employees.

Rumor Control: Any rumor or misinformation seen on an organizational or partner agency social media platforms should be addressed as soon as discovered. Rumors and misinformation are a concern when using social media and the instant nature of the uncensored medium has few safeguards to ensure accurate information is being shared. Social media is an equally important avenue to monitor public sentiment and become aware of misinformation quickly in order to provide a fast, accurate message to counter the misinformation.

Shortened approval process: There must be established trusted administrators that have the ability to post to social media without the standard approval processes. Because of the 24-hour operations, there needs to be several employees with this trusted status working in support of crisis communications during the operation.

Pause: With shortened approval process, trusted employees must be especially vigilant and if something does not feel right, do not post it. Pause, look at guidance, and ask for input.

The Big Four Questions: During crisis communications the public information team must have the ability to answer the following questions:

- What happened?
- What has your organization done?

- What will your organization do next?
- What do you want the citizens to do?

If you have the answers to those questions, you can effectively handle most crisis communications.

Support/use supporting agencies: During a crisis, there are many organizations working toward the same goal of supporting the emergency response to a disaster. To ensure citizens are getting consistent information across the platforms, post your agencies messages and information on other supporting agencies social media sites. This allows you to reach a more diverse audience during the crisis. Be certain to link your posts back to your baseline site so that visitors will have access to the full spectrum of information available. Additionally, information posted by other supporting agencies on their platforms, social media and traditional, could have value to your audience and you can share the other agency information on your own agency sites.

B. END OF POLICY

In conclusion, this thesis has looked at the current literature involving social media and emergency response and reviewed social media policies at the local, state, federal, and international levels. It has also conducted case studies on how social media is being used in emergency situations at the local, state, federal, and international levels; other factors affecting social media and emergency response and analysis findings for each section. In conclusion of the analysis, there is a disparity between the guidance provided and performance expectations of public affairs practitioners in the area of social media and emergency management.

Social media is a growing part of the nation's conversation and homeland security enterprise must be a part of this conversation or they will fail. This thesis has worked to provide emergency response agency public information practitioners with the knowledge and tools necessary to successfully leverage social media during emergency response operation.

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